DEFENSE COSTS AND DISARMAMENT

CHARLES DAVID MANRING

AN ABSTRACT

of

DEFENSE COSTS AND DISARMAMENT: A COMPARATIVE STUDY OF THE MILITARY AND SOCIAL COST COMPONENTS OF DEFENSE EXPENDITURES

by

Charles David Manring

Submitted to the

Faculty of the School of International Service

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of

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STUDY DATA AND INTERPRETATION: A COMPARATIVE STUDY

OF THE MILITARY AND PRIVATE, DEAF CONSUMERS

OF NURSING ENCYCLOPEDIES

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AN ABSTRACT

The U. S. Defense budget is analyzed to determine its role in economic considerations of disarmament. The author argues that routine living expenses provided by the defense budget should not be considered military in disarmament deliberations, but comprise what he defines as "social overhead," which would be required of the economy armed or disarmed: food, clothing, housing, and other services cetegorized as Medical, Welfare, Civic, and Technical Services. The costs of these are isolated, totaled, and compared to similar services on the civilian market, to determine how much strictly military expense is compensated for by savings on social overhead in the Defense Department. Data tabulated indicates that only half the Defense Budget--largely the costs of military hardware--would be obviated by disarmament; the remainder is devoted to social overhead, largely in the form of services.

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CHAPTER I

INTRODUCTION

In an era in which utter obliteration has become a real, if irrational alternative in the affairs of nations, international relations necessarily revolves around the constant awareness of nuclear danger. Increasing international preoccupation with the search for security in the nuclear age has lent new urgency and dimensions to the old pursuit of disarmament. Superficially simple, disarmament in practice is an extraordinarily complex problem at both the national and international level. Approaches range from a Better-Red-Than-Dead lunatic fringe to the plodding, frustrating, seemingly endless, but at least statesmanlike deliberations at Geneva. In the open societies of the West, all interested parties may be heard. At stake is national security--indeed, survival. Little wonder that every conceivable ramification is exhaustively analyzed, deliberated, and argued.

Not the least of many complications inherent in the control of armaments are economic considerations. One reputable writer states it thus:

> We are already alarmed by the problem of doing without the ten per cent or so of our national production that we now pour down the drain of military preparedness. But this expenditure can be regarded as our nonproductive contribution to the exigencies of the external world and the maintenance of an international order, such as it is, without which we could not survive. We now dump some $50 billions' worth a year of weaponry and military

> organization into the maintenance of international order without expectation of financial return. Economically, this is a dead loss.[1]

This is an opinion shared to varying degrees by many others. It is a lament of the concerned, the sincere, but the misinformed.

I. SIGNIFICANCE OF THE DEFENSE BUDGET

National security is expensive. The Department of Defense accounts for more than half of all the United States spends. Americans have grown accustomed to discussing defense in terms of billions of dollars, budget figures beyond personal comprehension. Concern has been voiced lest the United States spend itself into bankruptcy in the arms race. When it is announced that fifty-two billion dollars is to be obligated to national defense in 1963, it is easy to assume that, however necessary that staggering sum may be, it is a slice of the national economy wasted in the production, procurement, and employment of esoteric devices whose sole practical utility can be realized only in warfare, the very activity which the purchase of such goods and services is designed to prevent. Others have suggested that the United States cannot afford to disarm, that the economy is (or soon will be) irrevocably committed to military expenditures. Yet no detailed analysis of the defense budget is available to indicate accurately its contribution to the economic implications of disarmament. In arguments for and against disarmament proposals, and in discussion of possible implementation of

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[1]Walter Millis, A World Without War (New York: Washington Square Press, Inc., 1961), p. 96.

disarmament schemes, economic considerations are too often ignored, or dismissed with broad and inaccurate generalizations. Quite commonly one hears that ten per cent of the gross national product of the United States is devoted to military expenditures, hence is "lost to the economy," or is "wasted," or "goes down the drain."[2]

II. SCOPE AND PURPOSE OF THE STUDY

This is an analysis of the budget of the U. S. Department of Defense, undertaken in an attempt to determine one aspect of its effect on the national economy, and to help to determine the proper role of economic considerations in the problem of disarmament. No meaningful price can be attached to peace of mind, nor to national security. It is possible, however, to separate the economically negative aspects of national security from those expenditures which serve a useful purpose in spite of their military origin--in other words, to determine what is "wasted," and what the economy would have to provide in any event, armed or disarmed--by analyzing how defense funds are allotted. For example, the cost of jet fuel expended by a fighter pilot on a practice enemy intercept is a military expense, but the cost of his lunch is not, even though both are charged to the Department of Defense. A number of

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[2]For typical expressions of this sort of generalization, see Harrison Brown and James Real, "Community of Fear," and Walter Millis, "A World Without War," A World Without War (New York: Washington Square Press, Inc., 1961), pp. 42-43, and p. 64. For a balanced discussion of differences of opinion on the economic aspects of "Drastic changes in military magnitude," see Samuel P. Huntington, The Common Defense (New York and London: Columbia University Press, 1961), pp. 268-277.

normal social services are provided for the United States by the Department of Defense in the process of maintaining military power, at home and abroad, which have little to do with peace or war. Quite often, a tradition of service to the nation results in a considerable saving on these benefits.

Assumptions and Definitions

For purposes of defining the distinction between social and military services purchased by the defense budget, it is convenient to assume hypothetically the positive assurance of permanent peace throughout the world, and consequent total disarmament. All Department of Defense obligations which would thereby be obviated can then be defined as the cost of military power. All obligations presently fulfilled by the Department of Defense which would continue to be required under conditions of total disarmament can be defined as social overhead. In general, by this definition the cost of military power consists of the price of operational weapons systems, and the cost of social overhead results from normal living expenses.

Limitations on the Scope of the Analysis

An analysis comprehensive enough to extract all the economic implications of the military activities of the United States is a formidable task--indeed, perhaps an impossible one. The influence of the U. S. defense establishment is so subtly and inextricably interwoven into the fabric of the U. S. economy as to defy specific segregation. This analysis is limited to that major portion of the gross national

[illegible] [illegible] [illegible] [

product which can be clearly identified as military: the budget of the Department of Defense.

In addition, it is recognized that the total disarmament and positive assurance of permanent peace posed hypothetically for purposes of definition above would result in additional economic problems worthy of serious consideration, but beyond the scope of this analysis. No effort is made here to reconcile the problems associated with having to absorb the employees of the defense establishment into the civilian economy. Neither is any consideration given to the associated complications of having to shift all or part of present Department of Defense expenditures from the public to the private sector of the economy.

III. DESCRIPTION OF THE BUDGET

The financial obligations of the United States are budgeted by a number of different criteria. Analyses are prepared by agency, by function, by receipts and expenditures, by investments and operations, by programs and financing, and by other special criteria.[3] None of these analyses provides a breakdown in terms of military power and social overhead as defined for purposes of the present analysis, except to the extent that the Federal Program by Agency isolates the expenses of the Department of Defense.

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[3]U. S. Bureau of the Budget, The Budget of the United States Government, 1963 (Washington: Government Printing Office, 1962); for "Special Analyses" see Part 6, pp. 269-361. The official budget of the United States Government consists of three volumes: the one cited above, The Budget of the United States Government, 1963--Appendix, and The Budget of the United States Government, 1963--The District of

Functional Categories

Within the Department of Defense, the Federal Program by Function lends itself most readily to analysis by military and social obligations. Even this breakdown, however, is complicated by two different set of functional categories: one the list of conventional functions by which the Department of Defense budget is customarily prepared, and the other a new set of functions expressed in terms of military missions which has been introduced by the current administration, and is generally associated with Assistant Secretary of Defense (Comptroller) Charles J. Hitch. The two sets of categories compare as follows:

CONVENTIONAL CATEGORIES[4]	billions	MISSION CATEGORIES[5]	billions
Military Personnel	$13.2	Strategic Retaliatory	$ 9.1
Operation & Maintenance	11.6	Continental Air Defense	2.1
Procurement	16.5	General Purpose	18.4
Research, Development, Test, and Evaluation	6.8	Sealift and Airlift	1.3
Military Construction	1.3	Reserve & Nat'l Guard	1.9
Civil Defense	.7	Research & Development	5.7
Military Assistance	1.5	General Support	12.8
		Civil Defense	.7
		Military Assistance	1.5

The new functional categories by military mission were devised in an attempt not only to improve Defense Department management and budgeting, but also to present Defense appropriations to the Congress more meaningfully in terms of the commodities the appropriations are intended to buy.

Columbia. In addition, the Bureau of the Budget has prepared a pamphlet of abridged and condensed budget information entitled "The Budget in Brief, 1963.

[4] Budget of the U. S. Government, 1963, p. 103.

[5] Ibid., p. 58. Total does not equal total for conventional categories because of inclusion of $2.3 billion in prior authority.

Functional categories

Within the Department of Defense, the Defense Procurement by Function data shows clearly the emphasis on military and social spending. Even this overstates, however, the emphasis on the military and on functional categories, for the size of procurement impacts by which the economies of various forms is currently measured are the sum of direct and indirect effects. Indirect effects arise when the purchases by the service consumers in turn of utilities, wholesale and retail trade, finance, insurance, and real estate, and so on, are taken into account. Table 1 shows the direct and indirect effects of defense spending on the economy in 1977.

Direct effect categories		Indirect effect categories	
	Utility		Utility
Military Personnel	11.1	Service/Miscellaneous	1.7.4
Operation & Maintenance	11.1	Professional & Defense	1.1
Procurement	10.1	Research & Engineering	9.1
Research, Development		Military and Military	8.1
Test, and Evaluation	1.1	Service & Social Insurance	1.7
Military Construction	1.1	Business & Professional	1.1
Civil Defense	.1	Service, Medical	1.5.0
Military Assistance	1.1	Civil Defense	.1
		Military Assistance	1.1

The new functional categories by utility, which are derived in an attempt not only to improve policy- Specific measurements and budgeting, but also to provide better approximation of the economic more meaningful to say, only in terms of the economics for [illegible] any business or any.

COMMITTEE. In addition, the Bureau of the Budget has prepared a pamphlet of activities and measurements today, entitled "The Budget in Brief, 1981."

"Budget in Brief 1981," Department, 1981, p. 100.

"Budget in Brief, 1981," Department, 1981, p. 100.

[illegible] the DOD. These data are not yet [illegible] the conventional [illegible] of Defense of Defense of 1981 Estimate to write modestly.

The new categories have been used extensively in the discussion and justification of the Defense budget before the Appropriations Committees of the Congress; but although they have elicited considerable Congressional enthusiasm, it is required by law that the budget be prepared in accordance with the conventional categories. For this reason, the conventional functions have been used as the basis of the present analysis, interpolating where convenient from information presented to the Congress in terms of the new functional categories.

The formats, terminologies, and rationales employed by the different branches of the armed forces in presenting their individual portions of the Department of Defense budget vary. Items funded separately by one service may be included as a subdivision of a major category by the third. On some appropriations, the Marine Corps speaks for itself; in others it is represented as part of the Navy. In addition, each service has a number of projects which cut across categorical lines to find funds under several headings. For example, a research project may get its buildings from Military Construction, its equipment out of Procurement, pay its uniformed employees out of Military Personnel funds and its civilian employees out of Operation and Maintenance funds, and fund its contracts under the Research, Development, Test, and Evaluation appropriation. As a result, any functional analysis is not entirely uniform by branch of service.

Budget Terminology

The Federal Budget is compiled under two parallel headings: "New Obligational Authority" (NOA) and "Expenditures" (Exp.), which over the

long run are roughly equivalent sums. New Obligational Authority is Congressional authorization to incur obligations for the payment of money. Expenditures are the actual payments. The Bureau of the Budget's pamphlet The Budget in Brief describes budget procedures, and defines budget terminology:

> . . . . Appropriations are the most common form of new obligational authority; they authorize the agencies not only to order goods and services but also to draw funds from the Treasury and make expenditures to pay for the goods and services when delivered.[6]

The pamphlet explains the relationship between New Obligational Authority and expenditures as follows:

> Not all of the obligational authority enacted for a fiscal year is spent in the same year. Appropriations to pay salaries or pensions are usually spent almost entirely in the year for which they are enacted. On the other hand, the bulk of appropriations to buy guided missiles or to construct an airfield are likely to be spent 2 or 3 or more years after enactment because of the time required to prepare designs, arrange contracts, complete production or construction, and finally pay the bills.
>
> Therefore, when the Congress changes the new obligational authority requested by the President for a given year, it does not necessarily change the budget expenditures of that year by the amount of the increase or decrease. Such a change may spread its total effect on expenditures over a period of several years.[7]

Since New Obligational Authority is expressed in comparatively round numbers, is the category considered in Congressional hearings on appropriations requests, and in the long run does not vary appreciably from Expenditures, New Obligational Authority is the data cited for statistical analysis in this study.

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[6] The Budget in Brief, op. cit., p. 53. (Italics in original.)

[7] Ibid., p. 54.

IV. NATURE OF THE ANALYSIS

The Department of Defense budget as formally presented to Con- has been analyzed in detail to isolate social commitments.[8] Each of the armed services and the several Defense agencies, in presenting their annual programs for appropriations, describe and justify their planned expenditures to cognizant subcommittees of the Appropriations Committees in varying degrees of detail, in both formal prepared statements which include tabular data, and in less formal questioning and discussion with committee members in elaboration of prepared statements. Many of the items thus isolated, described, and discussed in the budget can be clearly identified as purely military in nature, such as weapons and ammunition. Others are clearly social obligations, such as food and medical expenses. It can be demonstrated almost invariably that no single item in the budget, however warlike or peaceful it may appear, is absolutely military, or non-military. Guns, for example, are used in sports, hunting, and police work; certain types of field rations and medical devices are peculiar to military purposes. The list of unlikely

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[8]The budget as submitted by the President is invariably adjusted by the Congress in the appropriation process, so that NOA requested and NOA finally authorized are seldom exactly the same. Major discrepancies in the 1963 budget of this nature resulted from differences of opinion between the legislative and executive branches over the controversial B-70 (or RS-70) program, and the National Guard and Reserve program; see John A. Goldsmith, "Senate Passes Defense Budget of $48.5 Billion," The Washington Post, June 14, 1962. Goldsmith notes, however, that ". . . the Senate bill would finance a program only eight million dollars larger than the President's request," so that basing the analysis on the President's budget as presented and justified is not significantly inaccurate.

applications of military devices is both long and interesting: tanks have been used to fight forest fires, Navy patrol planes have bombed icebergs threatening commercial sea lanes, the Air Force has dropped bales of hay to blizzard-bound cattle--rescue, disaster relief, and errands of mercy are commonplace. In determining social and military value for cost tabulations, however, it is necessary to consider only the most common conception of each budget item's role.

Where applicable, the costs of various types of social overhead in the defense establishment have been compared to the costs of similar goods or services on the civilian market: the ratio of civilian cost to military cost then yields a civilian cost factor by which military costs may be multiplied to determine comparable civilian costs.[9] By indicating the relative cost of military items in the civilian economy, the civilian cost factor is an approximation of the relative cost of social overhead under conditions of disarmament.

A separate chapter is devoted to each functional category within the main Defense budget, and additional separate appropriations for the Defense Department are considered together in Chapter VI. Social contributions are discussed; individual item costs within each social activity are totaled in a tabular summary, citing the source for each item; the civilian cost factor, where applicable is then applied. Each

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[9]When the civilian cost factor is greater than one, civilian cost is greater than military cost; when less than one, the military cost is greater. For example, an item which the defense establishment provides for $2 and which the civilian economy provides for $5 has a civilian cost factor of 2.5. If the two prices were reversed, the civilian cost factor would be 0.4.

chapter is concluded with a tabular summary of all social costs associated with that functional category. Finally, in Chapter VII all Department of Defense contributions to social overhead are summarized by functional category and deducted from the total budget. The final result is the effective cost to the United States of maintaining military power, and an indication of the economic adjustment with respect to the Department of Defense which would be required by disarmament.

V. SOURCES OF STATISTICAL DATA

The Department of Defense budget and request for appropriations is presented for Congressional consideration and justified by the services in hearings before several subcommittees of both Houses concerned with military affairs. The initial request by the Department of Defense is for an authorization bill, which grants permission for the Department to pursue its program. This is followed by hearings on the request for an appropriations bill, which provides funds to pay for the activities authorized by the authorization bill. Senior officials, civil and military, of the Department of Defense and the individual armed forces appear before cognizant Congressional subcommittees to justify both authorization and appropriation requests. A verbatim record of the hearings is published for the use of the Congress, and is available to the general public after any classified military information has been deleted.

Most of the data required for the present analysis is available in the hearings on Department of Defense appropriations held before

subcommittees of the House and Senate Appropriations Committees. Most of the formal testimony is duplicated, consisting of prepared statements and justification tables presented first to the House and then to the Senate, and included in the record of each. Questions and answers on various aspects of the testimony are recorded verbatim as they occur in the hearings, and provide spontaneous information which varies between House and Senate Hearings. In addition, the Senate hearings include "reclama" testimony, requests for restoration of funds deleted from the budget by House action.

CHAPTER II

MILITARY PERSONNEL

A $13,230,200,000 appropriation entitled "Military Personnel" is budgeted by the Department of Defense in fiscal year 1963 for the compensation of the uniformed men and women of the armed forces, at an average strength of 2,604,000 active members and 973,000 reserves. The appropriation request, as presented to Congress, is divided by branch of service, and within the service budgets is divided by active, reserve, and national guard personnel, and subdivided within these divisions by officer, officer candidate, and enlisted personnel requirements.

The appropriation request includes three general categories: Pay, Allowances, and Retired Pay. Subsumed under the category of Pay are basic salaries, called BasicPay; and additional incentives such as Proficiency Pay for certain key enlisted personnel; Hazardous Duty Pay for flying, parachuting, submarine duty, and certain other dangerous specialties; and an extra remuneration called Special Pay for doctors and dentists, and for divers. The Allowances category includes funds for subsistence, quarters, clothing, travel and transportation, and a number of miscellaneous expenses. Retired Pay is in a class by itself, consisting of the benefits awarded to military personnel no longer on active duty, or to their survivors.

I. PAY

Base Pay

The salaries of persons engaged in military activities are part of the cost of military power. Compensation for the time, energy, risk, and expertise involved in the planning and execution of operations and maintenance of warships, tanks, aircraft, and other weapons systems is an economic waste without the need to be prepared for war. Disarmament would relieve the United States of the need for these services, and consequently the need to pay for them.

A surprisingly large number of uniformed personnel, however, are not engaged in uniquely military activities, but must be employed by the armed forces to provide for ordinary social overhead, irrespective of any need for military preparedness. For example, nearly 55,000 officers and more than 100,000 enlisted personnel are employed by the Department of Defense just to provide medical care to members of the armed forces and their dependents. Disarmament might shift the responsibility for providing such services elsewhere, but would not obviate their cost to the U. S. economy. Indeed, the cost of these social services on the civilian market might well be increased appreciably.

Social services performed by the armed forces may be summarized in four general categories: Medical Services, Welfare Services, Civic Services, and Technical Services, plus a Miscellaneous category. These are responsibilities presently fulfilled by the Department of Defense which would be required of the U. S. economy in one form or another, armed or disarmed:

MEDICAL SERVICES

Medicine
Dentistry
Nursing
Veterinary
Therapy
Pharmacy
Laboratories
Hospitalization

WELFARE SERVICES

Religion
Recreation
Information
Education
Music
Clerical
Nutrition
Disbursing

CIVIC SERVICES

Law Enforcement
Firefighting
Transportation
Construction
Utilities
Mail
Communications
Storekeeping

TECHNICAL SERVICES

Engineering
Research
Aerology
Hydrography
Oceanography
Cartography
Photography
Space

The Miscellaneous category includes Trainees, Students, Patients, Prisoners, and apprentices engaged in normal social activities but not specifically designated by the various service systems.

In addition, one activity of primary Civic value but worthy of separate consideration is the Army National Guard. Major General D. W. McGowan, Chief of the National Guard Bureau of the Department of the Army, in his testimony for the House Appropriations Subcommittee stated the primary mission of the Army National Guard as follows:

> To provide units organized, equipped, and trained to function efficiently at existing strength in the protection of life and property, and the preservation of peace, order, and public safety under competent orders of Federal or State authorities.[1]

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[1]U. S. Congress, House of Representatives, Committee on Appropriations, Department of Defense Appropriations for 1963, Hearings before Subcommittee, 67th Congress, 2d Session, printed in six volumes (Washington: Government Printing Office, 1962) [Hereafter cited as

It seems apparent that even in the event of disarmament--quite often referred to as "disarmament to police force levels"--that a force comparable to the Army National Guard (though perhaps not quite as large), and the associated expense, would be required in the public interest. This does not appear to be the case with the Air National Guard, the mission of which is more strictly military in nature.

In order to determine the number of regular armed forces personnel concerned with ordinary social overhead in terms of Medical, Welfare, Civic, and Technical Services, the current classification structure of each of the armed forces has been analyzed in detail.[2] All four of the armed services--Army, Navy, Marine Corps, and Air Force--classify both officers and enlisted personnel by occupational specialty. The Air Force, for example, classifies its officers in thirteen career areas, which are divided into forty-seven specialties, which are further subdivided into one hundred eighty-five separate sub-specialties, ranging all the way from "1025: Pilot, Helicopter" to "9936: Veterinary Officer, Technologist." Similarly, Air Force enlisted personnel are

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"House Appropriations Hearings", Part 6: "Appropriation Language; Army Reserve Components; Chemical and Biological Warfare Programs, Army; Testimony of Members of Congress, Organizations and Interested Individuals," p. 117.

[2]It is recognized that the numbers of personnel presently employed in various social categories, and the overall force levels of the services, are being gradually reduced by several hundred thousand men to achieve the force level requirements laid out in the FY 1963 Defense budget. While the specific figures used in this part of the analysis are accurate only as of April, 1962, the percentages computed should not change appreciably and are considered sufficiently accurate for the level of generalization employed in the overall analysis.

categorized by forty-five career fields and two hundred nineteen specialties, ranging from "01090: First Sergeant" to "98010: Dental Helper."[3] The Marine Corps employs a similar classification arrangement, categorizing its officers by one hundred nine specialties, and its enlisted personnel by two hundred sixty-five, in forty-one occupational fields. The Army and Navy both assign classifications similar to those used by the Air Force and Marine Corps, and, in addition, organize many of their specialists into corps. The Army Quartermaster Corps, for example, corresponds to the Navy Supply Corps, the Army Corps of Engineers to the Navy Civil Engineer Corps, and so forth.

Analysis of the armed services by occupational specialty is not ideal for purposes of isolating personnel engaged in social services, since personnel are not always employed strictly according to classification. For example, a Navy boiler tender might be assigned temporary police duty with the Shore Patrol; an Air Force mechanic might serve temporarily as a messman; an Army infantryman might act as a Chaplain's assistant; and so forth. But in general, assigned occupational specialties provide the best indication available of military personnel employment, and yield a representative percentage of officer and enlisted personnel required by social overhead. The detailed analysis is contained in Appendix B, including sources of statistical information. Tabs 1 through 4 of Appendix B show the numbers of personnel, both

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[3]To illustrate the extensive range of skills and specialties required by the armed forces, the Air Force classification structures for both officers and enlisted personnel are included as Appendix A.

officer and enlisted, of the Army, Navy, Marine Corps, and Air Force, respectively, specializing in various activities required by social overhead. Table I included here is the overall summary of the statistics tabulated in Appendix B. Table I shows a total of more than 115,000 of the armed forces' 327,000 officers, and more than 1,000,000 of their 2,500,000 enlisted personnel, engaged in social services: a percentage for officers of 35.4 per cent, and for enlisted personnel of 43.5 per cent.

A reasonable estimate of the comparable civilian cost of the social services performed annually by the armed forces can be computed from data on average earnings published by the Bureau of Labor Statistics of the Department of Labor. Bulletin No. 1310 "National Survey of Professional, Administrative, Technical, and Clerical Pay, Winter 1960-61" tabulates the most current nationwide data on average annual earnings of selected professions in private industry, which correspond closely with the professional status of armed forces officers. The annual salary for accountants and auditors, for example, averages out to $8,876; for chemists, $11,023; for engineers, $11,600; for attorneys, $12,375; for personnel directors, $9,480; and for office managers, $9,384.[4] The overall annual average professional salary can be computed from these data at approximately $10,500, for jobs comparable to those performed by military officers.

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[4]U.S. Department of Labor, Bureau of Labor Statistics, "National Survey of Professional, Administrative, Technical, and Clerical Pay, Winter 1960-61," Bulletin No. 1310, (Washington: Government Printing Office, October, 1961), p. 12.

TABLE I

SUMMARY OF ARMED FORCES PERSONNEL CLASSIFIED IN OCCUPATIONAL SPECIALTIES REQUIRED BY SOCIAL OVERHEAD*

	Officer	Enlisted
Specialists in Medical Services	35,183	100,267
Specialists in Welfare Services	11,188	356,698
Specialists in Civic Services	58,536	411,584
Specialists in Technical Services	10,699	12,517
Miscellaneous Specialists		191,437
Total Number of Social Specialists	115,606	1,072,503
Total Personnel in the Armed Forces	327,001	2,465,226
Per Cent Required by Social Overhead	35.4%	43.5%

*Detailed analyses of each of the armed services by occupational specialty classifications are contained in Appendix B, including the sources and justifications of figures summarized here.

TABLE 1

SUMMARY OF ANNUAL PUBLIC EXPENDITURE CLASSIFIED BY
ECONOMIC AND SOCIALLY USEFUL SPENDING
IN SOUTH AFRICA

Publication	Difference	
[illegible]	[illegible]	Expenditure on political services
[illegible]	[illegible]	Expenditure on military services
[illegible]	[illegible]	Expenditure on civil services
[illegible]	[illegible]	Expenditure on financial services
[illegible]		Miscellaneous expenditure
[illegible]	[illegible]	Total amount of public expenditure
[illegible]	[illegible]	Total Revenue in the Final Period
[illegible]	[illegible]	The net loss incurred by public expenditure

*Expenditure analysis is made of the known activities of government expenditure/investment not restricted to figures by including the errors and justifications of figures mentioned above.

Average compensation for those civilian occupations which correspond to enlisted service in the armed forces is tabulated by the Bureau of Labor Statistics in different forms in several different documents. A current and convenient summary is contained in "Employment and Earnings, Vol. 8, No. 10" for April of 1962; table C6 of this booklet tabulates the gross average weekly earnings for production workers in mining and manufacturing, construction workers in contract construction, and non-supervisory workers in wholesale and retail trade. Overall weekly earnings for these 25,000,000 workers throughout the United States average out at $98.10, an annual compensation of about $5,000.[5]

Average annual officer and enlisted salaries for the armed forces can be computed by dividing the total pay and allowances budgeted by the four armed services by the total number of officers and enlisted personnel budgeted for.[6] These two computations result in an average enlisted salary of about $3,000 ($3,086.73) and an average officer salary of about $8,900 ($8,874.04). The ratio of average civilian salary to

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[5] $5,101.20. A Bureau of Labor Statistics "Summary Release, No. 1 of 3 (31 Areas)" dated March of 1962 and entitled "Occupational Earnings in Major Labor Markets, 1961-62" tabulates average earnings in detail for selected occupations in six broad industry divisions by geographic area of the U. S. "Office Clerical" earnings average out to about $4,160 annually, and "Maintenance and Powerplant" and "Custodial and Material Movement" earnings average about $4,825. While these are somewhat below the average assumed, the wage scales for union building trades announced in a Department of Labor News Release dated 27 April 1962 (USDL:5171) average $3.87 per hour, about $7,740 annually, considerably above the average assumed, indicating that $5,000 is a reasonable overall estimate.

[6] These statistics are tabulated in House Appropriations Hearings, Part 1: "Military Personnel," passim, in the budget presentations made by each of the armed services to Congress.

average military salary then yields civilian cost factors of 1.67 for enlisted personnel, and 1.18 for officers, in providing social services for the citizens presently in the armed forces, from which can be computed the comparable cost of providing these services under conditions of disarmament. Table II is a recapitulation of this military and comparable civilian compensation for social overhead in the armed forces. The percentages of officer and enlisted personnel required by social overhead, and civilian cost factors, are applied to total military base pay, resulting in a total military cost of social services of nearly $3 billion, and a comparable civilian cost of more than $4 billion.

Incentives

Incentive pay is awarded in two general categories, Hazardous Duty Pay and Special Pay. The term "Hazardous Duty" is no longer popular with the armed forces; the term currently preferred to describe the compensation awarded for the extra risk involved in certain duties is simply Incentive Pay. Hazardous duties for which such pay is awarded include: Flying, Parachuting, Submarine Duty, Explosives Disposal, Care of Lepers, and Duty as Human Subjects in Thermal Stress, Low Pressure Chamber, and Acceleration and Deceleration Experimentation. Of these, parachuting, submarine duty, and explosives disposal are almost entirely the result of military requirements which would be obviated by disarmament. Leprosy duty, and acting as human experimental subjects in medical research, on the other hand, are activities which would continue to be desirable.

TABLE II

MILITARY BASE PAY FOR SOCIAL SERVICES, WITH
COMPARABLE CIVILIAN COMPENSATION

	Officer	Page*	Enlisted+	Page*
Base Pay				
Army	$ 660,807,300	8	$1,693,730,400	10
Navy	431,922,000	137	1,194,765,000	139
USMC	94,238,000	237	310,661,000	242
USAF	833,047,000	268	1,584,335,000	293
Military Total	$2,020,014,300		$4,783,491,400	
% Social Overhead	35.4%		43.5%	
Social Overhead Cost	$ 715,085,062		$2,080,818,150	
Civilian Cost Factor	1.18		1.67	
Comparable Civil Cost	$ 843,800,000 (rounded)		$3,475,000,000 (rounded)	
Total Military Base Pay for Social Services:			$2,795,903,000	
Total Comparable Civilian Compensation			$4,318,800,000	

*Page numbers cited locate statistical data in House Appropriations Hearings, Part 1.

+Base Pay listed for Enlisted personnel includes Proficiency Pay.

Flying is the major category in which incentive pay is awarded, and the one for which common social value is least easily isolated. It appears likely that most military flying would be obviated by disarmament, including bombers, tankers, fighters, interceptors, and most airlift and reconnaissance. But it also seems likely that a number of aerial tasks presently performed by the armed forces would continue to be needed: search and rescue, aerial photography and mapping, hurricane and weather reconnaissance, transportation of the President and other government officials, administrative flying, and part of the mission of the Military Air Transport System (MATS), which is the government airline comprised of both Air Force and Navy aircraft and personnel, handling both passengers and freight. Perhaps the least obvious social contribution of military flying is the training and experience it provides for the many aviators who leave the services to become airline pilots, or commercial pilots in other branches of civil aviation.

A reasonable estimate of the percentage of military personnel flying as a result of social overhead can be assumed from the figures supplied by the individual armed services to Congress showing the percentages of their personnel engaged in military operations, as opposed to those involved in non-operational activities:[7]

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[7]Statistics cited here for the Army, Navy, and Marine Corps appear in House Appropriations Hearings, Part 1, pages 62, 199, and 224 respectively. The Air Force figures were provided by Mr. James H. Banton, of the Air Force Office of Manpower Organization.

	ARMY	NAVY	USMC	USAF
Operating Forces	67.6%	62.9%	66.2%	67.3%
Supporting Forces	8.7	12.4	9.0	15.0
Training Forces	15.4	16.7	18.4	17.0
Other Activities	8.3	8.0	6.4	0.7
% Non-Operational	32.4%	37.1%	33.8%	32.7%

These data suggest that approximately one-third of the flying presently performed by military personnel would still be required even should the United States disarm, hence that this percentage of present military incentive pay for flying, or its civilian equivalent, would still be required of the economy. The current issue of the Federal Aviation Agency's Statistical Handbook lists the average annual salary of civilian pilots and co-pilots at $18,513.24, for duties corresponding to those performed by aviation officers in the armed forces. The average salary for "other flight personnel," who perform duties corresponding to those of military enlisted aviation crewmen, is listed at $13,969.87.[8] Subtracting from these figures the average annual salaries of $10,500 and $5,000 computed from Bureau of Labor Statistics data for the two levels of civilian workers corresponding to military officers and enlisted men, respectively,[9] yields a sum comparable to incentive pay for flying for pilots of about $8,000 annually, and for crew-members of about $9,000 annually. Air Force testimony before the Appropriations subcommittees of Congress on appropriations requests for Military

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[8] U. S. Federal Aviation Agency, FAA Statistical Handbook of Aviation, 1961 Edition (Washington: Government Printing Office, 1961), p. 90.

[9] Supra, p. 16.

Personnel tabulates annual rates of flying pay for both officers and enlisted men, approximately $2,400 and $1,000 respectively.[10] The ratios of these two figures to those computed for civilian aviation yield civilian cost factors for flying of 3.33 for officers and [illegible].00 for enlisted men. Non-operational flying percentages and these civilian cost factors are applied to total military incentive pay for flying in Table III, yielding a comparable civilian cost for aviation social services presently performed by the military of nearly half a billion dollars under conditions of disarmament.

The other category in which Incentive Pay is awarded is called Special Pay, for divers, and for medical specialists. Curiously, diving and salvage work is not listed with the other hazardous duties by the armed services, but does qualify for extra incentive compensation in terms of Special Pay. Doctors, dentists, and veterinarians also qualify for Special Pay on a graduated scale. Doctors and dentists with less than two years service, and all veterinarians, receive an extra $100 per month. This Special Pay is increased in steps for doctors and dentists up to a maximum of $250 per month for those with over ten years service. It seems apparent that Special Pay for both divers and medical specialists is virtually unrelated to military preparedness, and would constitute an expense to the U.S. economy disarmed or not. All military Incentive Pay contributing to social overhead is summarized in Table III, at a total of $461,103,120.

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[10] House Appropriations Hearings, Part 1, pp. 291 and 295.

[illegible]

[illegible]

[illegible]

TABLE III

MILITARY INCENTIVE PAY FOR SOCIAL SERVICES WITH COMPARABLE CIVILIAN COMPENSATION

	Officer	Page*	Enlisted	Page*
Hazardous Duty Pay				
Flying, 32.4% Army	$ 5,660,900	8	$ 918,200	10
37.1% Navy	18,345,200	138	6,172,700	140
33.8% USMC	3,696,000	239	622,900	245
32.7% USAF	59,100,300	288	7,229,000	293
Total	$ 86,802,400		$ 14,942,800	
Civilian Cost Factor	3.33		9.00	
Comparable Civilian Cost	$289,333,000		$134,485,200	
Experimental, etc.				
Army	$ 225,720	8	$ 480,000	10
Navy	61,000	138	110,000	140
USAF	226,000	292	787,000	293
Total	$ 512,720		$ 1,377,000	
Special Pay				
Medical Specialists,				
Army	$ 13,277,400	8		
Navy	10,342,000	138		
USAF	9,126,000	288		
Total	$ 32,745,400			
Divers, Army	$ 15,800	8	$ 33,000	10
Navy	741,000	138	1,831,000	140
USMC			29,000	245
Total	$ 756,800		$ 1,893,000	
Total Military Incentive Pay for Social Services			$139,030,120	
Total Comparable Civilian Compensation			$461,103,120	

*House Appropriations Hearings, Part 1.

II. ALLOWANCES

The allowances paid to military personnel result almost entirely from the requirements of social overhead. In general, allowances provide services which the national economy would have to provide for the men and women presently comprising the armed forces in any event, and have little to do with the military activities and responsibilities of the defense establishment, hence would have to be provided elsewhere in the event of disarmament: food, housing, clothing, some travel, and a number of miscellaneous items.

Food

The costs of feeding military personnel are budgeted by the Defense Department in two categories, one called the Basic Allowance for Subsistence, and the other an alternative termed Subsistence in Kind. The Basic Allowance for Subsistence is paid directly to all military members who provide their own meals. This includes all officers, who must pay for their meals whether they subsist in military messes or in private quarters; it also includes most enlisted personnel who have dependents, and who, consequently, subsist in the private homes maintained for their families rather than in military barracks or aboard ships. The allowance amounts to $47.88 per month for officers, and to $1.35 per day for enlisted personnel, and is intended to provide food only for the military member and not for any of his dependents. Sustenance provided by military messes for those enlisted personnel who do not receive the Basic Allowance for Subsistence is funded as Subsistence in Kind. An associated expense is the maintenance of commissary stores,

[illegible]

[illegible]

[illegible]

military supermarkets where service families can buy food at a saving as a fringe benefit. Ordinarily military commissaries are self-supporting, but in certain areas where comparable civilian facilities are not available, require appropriated funds. Table IV summarizes the total cost to the Defense Department of feeding military personnel; the bill comes to more than a billion dollars, with slightly more than half being paid out in the Basic Allowance for Subsistence, somewhat less than half devoted to Subsistence in Kind, with just a fraction to maintain commissary stores.

Housing

The cost of housing military personnel and their dependents is handled in a fashion similar to providing subsistence. A Basic Allowance for Quarters (more commonly referred to as "BAQ") is paid on a scale graduated by rank to all military personnel who must find their own quarters in local civilian communities. Military personnel for whom housing is provided in terms of barracks and public quarters receive no BAQ; this sum is forfeited to be applied instead to defraying the costs of maintaining public quarters.

The cost to the Department of Defense of dependent housing and public quarters has been a subject of strict annual scrutiny by the Congress. The Assistant Secretary of Defense (Comptroller), Charles J. Hitch, in his testimony before the House Appropriations Subcommittee on Defense Appropriations, carefully tabulated and justified for the Congress all costs for military dependent housing, including BAQ, a projected increase in BAQ, BAQ forfeited where housing is provided, and

TABLE IV

ALLOWANCES BUDGETED FOR SUBSISTENCE
OF MILITARY PERSONNEL

	Basic Allowance For Subsistence	Page*	Subsistence In Kind	Page*	Commissary Stores†
Army			$224,200,000	16	$2,000,000
Officers	$ 63,733,100	8			
Enlisted	139,866,200	10			
Cadets	1,182,600	12			
Reserves	2,700,000				
Navy			151,600,000	145	3,357,000
Officers	42,551,000	138	208,000	161	
Enlisted	88,517,000	140			
Midshipmen	1,697,000	142			
Cadets	337,000	142			
Reserves	1,816,000	159			
USMC			42,100,000	247	429,000
Officers	9,595,000	237			
Enlisted	23,045,000	242			
Cadets	275,000	246			
ROCs	122,000	269			
Reserves	2,374,000	269			
USAF			95,300,000	287	2,500,000
Officers	77,048,000	288			
Enlisted	191,642,000	293			
Cadets	1,306,000	296			
Air Natl Guard	2,753,000	390			
Reserves	1,299,000	432			
TOTALS	$642,800,900		$513,408,000		$6,286,000

Total Allowances Budgeted for Subsistence of Military Personnel $1,164,574,900

*House Appropriations Hearings, Part 1.

†Navy and Marine Corps figures are cited in House Appropriations Hearings, Part 3: "Operation and Maintenance." Army and Air Force figures are not specifically identified, and have been interpolated.

also the costs of building, financing, and maintaining Wherry, Capehart, and other military housing, as well as mortgage insurance premiums paid by the services in behalf of their members. Not all of these expenses are budgeted in the Military Personnel appropriation; some of the building costs, as well as the costs of building military barracks and officers' quarters, are funded under the Military Construction appropriation. However, in view of the convenient tabulation made by Secretary Hitch, all dependent housing costs are considered together in Table V. Costs for barracks, and for living quarters afloat, will be considered elsewhere. Table V is a summary of all the obligations budgeted by the Department of Defense for dependent housing as discussed by Mr. Hitch, and shows a total Defense Department contribution to social overhead of nearly two billion dollars.

TABLE V

OBLIGATIONS BUDGETED FOR DEPENDENT HOUSING FOR MILITARY PERSONNEL*

Basic Allowance for Quarters	$1,393,035,000
Maintenance of Surplus Commodity Housing	6,900,000
New Construction	319,443,000
Major Improvements	32,249,000
Wherry Housing Acquisitions	44,153,000
Capehart Housing Payments	118,859,000
Surplus Commodity Credit Housing	7,893,000
Rental Guarantee Payments	110,000
Houses Leased as Public Quarters	13,256,000
Mortgage Insurance Premiums	4,515,000
TOTAL	$1,940,421,000

*House Appropriations Hearings, Part 2: "Secretary of Defense; Chairman, Joint Chiefs of Staff; Service Secretaries and Chiefs of Staff; Overall Financial Statements;" data tabulated here are derived from Tables 3 and 4 of Secretary Hitch's presentation, pp. 286-287.

Clothing

All citizens, including any who may be members of a military establishment, are clothed as a normal and continuing function of social overhead. Disarmament would probably change the source and type of clothing required, but would not do away with the requirement. The Department of Defense presently budgets funds to provide an initial clothing allowance for all enlisted personnel, which purchases all normal wearing apparel from underclothing to overcoats. In addition, funds are provided for the purchase of various types of special clothing, such as foul weather gear, work clothes, dress and ceremonial garb, and even civilian clothing. The Army describes this appropriation as follows: "Provides for procurement of initial issue of clothing to enlisted personnel, and for cost of civilian clothing to military personnel authorized to wear civilian clothing. Also provides for supplementary issues in kind, clothing allowances for special categories of troops such as military police and escort detachments, and cost of replacement issues due to changes in body stature during the first 6 months of service."[11] Officers in the regular service must provide their own uniforms and clothing. Reserve officers and officer candidates, however, like enlisted personnel, receive an initial outfit at the expense of the government. Furthermore, enlisted personnel receive an allowance for the maintenance and replacement of the initial outfit of clothing, from an appropriation described by the Army as follows: "Provides for a

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[11] Base Appropriation Hearings, Part 1, p. 13

Clothing

[illegible]

[illegible]

monetary allowance in lieu of clothing in kind to enlisted personnel in the Army after the first 6 months of service. This includes a basic allowance of $4.20 a month for enlisted personnel who have 6 to 36 months of service, and an allowance of $5.40 and $6 respectively for male and female enlisted personnel with over 36 months service. Also includes monetary allowance for civilian clothing, and for supplementary clothing items required by enlisted women."[12] All four services provide similar allowances for their personnel, although clothing costs are tabulated and described by the different services under a variety of titles: Purchase of Individual Clothing, Clothing and Uniform Allowance, Maintenance Allowance, Allowance in Lieu of Clothing, and others. Table VI is a tabular summary of all clothing costs budgeted by the Department of Defense, at a total cost of nearly $250,000,000.

Travel

Much of the cost of transporting military personnel, their dependents, and their household goods, must be charged to the price of military power, since the necessity for moving is often the direct result of the military needs of the services. Various types and numbers of qualified personnel are required to man the U. S. military installations throughout the United States, and at many foreign points throughout the world; in addition, the services find it desirable to shift their personnel periodically for morale and career purposes. The categories under which the Permanent Change of Station (PCS) travel of military personnel and their

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[12]Ibid., p. 15.

TABLE VI

ALLOWANCES BUDGETED FOR CLOTHING
MILITARY PERSONNEL

Service	Amount	Page*
Army		
Officers	$ 4,820,000	9
Enlisted	83,610,000	13, 15
Reserves	2,000,000	
Navy		
Officers	2,477,000	139
Enlisted	60,566,000	142
Cadets	1,112,000	142
Reserves	1,328,000	159
USMC		
Officers	394,000	241
Enlisted	17,162,000	246
Cadets	178,000	246
Reserves	1,399,000	269
USAF		
Officers	2,810,000	268
Enlisted	67,951,000	291
Cadets	24,000	296
Air Natl Guard	1,984,000	399
Reserves	2,000,000	432
TOTAL	$249,815,000	

*House Appropriations Hearings, Part 1.

families is budgeted provide an indication of how much PCS travel is comparable to civilian travel, hence would still be required in the event of disarmament. These categories include:

Accession Travel
Training Travel
Operational Travel Between Duty Stations
Rotational Travel To and From Overseas
Separation Travel
Travel of Organized Units

Operational, Rotational, and Unit Travel, in general, are the most expensive, consuming from 50 per cent to 90 per cent of total PCS funds within the various services' travel budgets; these three categories also appear to be the more strictly military in nature. Accession, Separation, and Training Travel correspond more closely to the travel required in a typical civilian career. Accession Travel is that performed by military personnel in reporting to their initial duty stations upon entering the service; Separation Travel is that required to return home upon completion of military service; and Training Travel is that required to move to and from schools, colleges, and training centers. Similarly, most civilians will move at least once in going to a new job or branch office; most will move to a new home or community upon retirement; and most civilians, particularly in the age group comparable to military personnel, periodically travel to and from training courses, colleges, and conventions.

Even though a number of civilian professions require periodic moves, seldom are the moves as far or as frequent as those inherent in military service. In its most recent report on "Mobility of the Population of the United States," the Bureau of the Census tabulates in

exhaustive detail the number of moves made annually by persons and families in the United States, by race, age, sex, and so forth. Table 6 of the Mobility Report for 1960 (published in January of 1962) indicates that for the one year period from March of 1959 to March of 1960, 19.9 per cent of American males between the ages of eighteen and sixty-four moved at least once; it is also noted that these figures have not changed appreciably for the last thirteen years.[13] For military personnel the percentage is considerably higher. Air Force testimony in justification of its request for PCS funds includes the total number of persons moving, from which can be computed a representative percentage of 64.3 per cent of the armed forces making at least one move annually.[14] The ratio of this percentage to the smaller percentage of civilians moving annually yields a civilian cost factor of 0.31. In Table VII, this cost factor is applied to the total cost of military Permanent Change of Station Travel, $799,126,000, resulting in a comparable civilian cost of $247,729,060 for travel required under conditions of disarmament. It is interesting to note that the comparable civilian cost of military travel as computed in this fashion very closely approximates the figure derived by summing the costs of Accession, Separation, and Training Travel.

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[13]U. S. Bureau of the Census, "Mobility of the Population of the United States, March 1959 to 1960," Current Population Reports, Population Characteristics, Series P-20, No. 113 (Washington: Bureau of the Census, January 22, 1962), pp. 18-20. A news item, "New Rules Slated for Household Movers," The Washington Post, July 8, 1962, bears out the statement: "The household goods carrier industry estimates that one of five American families moves its belongings every year. . . ."

[14]House Appropriations Hearings, Part 1, p. 325.

TABLE VII

MILITARY PCS TRAVEL REQUIREMENTS, AND COMPARABLE CIVILIAN COST

Service	Amount	Page*
Army		
Regular	$353,000,000	19
Reserve	4,000,000	
Natl Guard	2,000,000	
Navy		
Regular	155,300,000	136
Reserve	6,361,000	160
NROTC	1,104,000	163
USMC		
Regular	40,600,000	231
Reserve	3,622,000	269
OCs	288,000	269
USAF		
Regular	227,168,000	332
Reserve	1,729,000	432
Natl Guard	3,954,000	390
Total Military PCS Travel	$799,126,000	
Civilian Cost Factor	0.31	
Comparable Civilian Cost	$247,729,000	

*House Appropriations Hearings, Part 1. Army Reserve and National Guard figures are interpolated.

TABLE III

ESTIMATED COST OF TOTAL [illegible] AND
[illegible] FOR 1967

Item	Cost	Page*
Air		
Regular	[illegible]	19
Reserve	[illegible]	
Nat'l Guard	[illegible]	
Navy		
Regular	[illegible]	28
Reserve	[illegible]	29
MCFC	[illegible]	30
Army		
Regular	[illegible]	37
Reserve	[illegible]	38
DCA	[illegible]	39
USMC		
Regular	[illegible]	47
Reserve	[illegible]	48
Nat'l Guard	[illegible]	49
TOTAL ESTIMATED COST TOTAL [illegible]	[illegible]	
[illegible]	[illegible]	
[illegible]	[illegible]	

*Page [illegible] Report, Part I. Army Reserve and National [illegible].

Miscellaneous Allowances

Special allowances paid to military personnel, or paid in their behalf, which must be budgeted by the Department of Defense include:

Overseas Station Allowances
Foreign Duty Pay
Reenlistment Bonuses
Severance Pay
Death Gratuities
Lump Sum Terminal Leave Payments
Employer's Contribution to Social Security
Contributions to State Retirement Systems
Mortgage Insurance (Included with Housing Costs)
Interest on Enlisted Personnel Deposits
Expenses of Military Prisoners

Overseas Station Allowances and Foreign Duty Pay, while compensation for extraordinary cost of living expenses, are, nevertheless, part of the cost of military power, since both would be almost entirely obviated without a military establishment with the present overseas responsibilities of the United States Department of Defense. The remainder of the miscellaneous allowances are expenses incident to ordinary social overhead: Reenlistment bonuses correspond to the occasional incentive bonuses awarded periodically in civilian employment; Severance Pay, Death Gratuities, and Lump Sum Terminal Leave Payments for leave earned but not taken constitute final settlement compensation for services rendered; Contributions to Social Security and State Retirement Systems are self-evident social services; Mortgage Insurance and Interest on Deposits are normal financial transactions unrelated to military power; Expenses of Military Prisoners include rewards for apprehension, costs of gratuitous issue of toilet articles and so forth, costs of confinement of military prisoners in non-military facilities, and other normal

Dependency Allowances

Social allowances will be military personnel, or pay to their wives, which may be supplied by the Department of Public Welfare.

Overseas Dependent Allowance
Family Bill Pay
Hospitalization Benefits
Survivors Pay
Death Gratuities
Long Term Disability Payments
Veteran's Contribution to Social Security
Contributions to Pension Retirement Systems
Religious Ministers (Included with Housing Costs)
Bonuses to Active Reserve Members
Spousal Or Military Dependents

Covering Active Military and Foreign Duty Pay, with compensation for extraordinary non-at living expenses, pay, hospitalization, part of the cost of military pensions, since these would be almost entirely devoted without a military dependent with the growing awareness responsibility-ship of the United States Government of Veterans. The remainder of the administrative allowances are expenses incident to military social vocational training. Contributions Social corresponds to the occupational Incentive Program Medical Personnel is existing Congressional Appropriation Pay, Basic Functional, and the Training Leave Programs for Long Active Duty Men Taken Contributions Cost Maximum Compensation for Service Pensions Contributions to Social Security and State Retirement Systems Non-Military Social Security Taxes Insurance and Training or Deposits by Social Security Contributions unrelated to military Pension Payments of military Pensions Pension Value for Appropriation, Pensions of Pensions Less or Lower Retirement Pay to Civil, Death of Military-Dual of military Pensions to non-military Facilities, and other Social

penal expenses. These miscellaneous costs and allowances are summarized in Table VIII at a total cost of approximately half a billion dollars in normal social overhead charged to the Department of Defense.

III. RETIRED PAY

A total of $1,059,000,000 is budgeted by the Department of Defense for the pay and allowances of retired military personnel and their survivors. Thirty million dollars of this sum is requested by separate legislation, to compensate and adjust payments presently being made under two different retirement acts, which it is desired to consolidate into a single system. It should be noted that military retirement pay is a sum separate from any veteran benefits, which are handled through separate appropriations to the Veterans' Administration, and not through Department of Defense appropriations.

It seems apparent that military Retired Pay is a Department of Defense contribution to normal social overhead. This is an obligation resulting from services already rendered, and would have to continue whether the military establishment did or not, a situation clearly recognized by both the Department of Defense and Congress. Representative Daniel J. Flood, of Pennsylvania, in discussing the testimony of J. A. Wylie, Director of Budget and Finance of the Office of the Secretary of Defense, on Military Retired Pay, remarked: "I also like the first sentence of your next to the last paragraph: 'Payments under this appropriation are required by law and any funds that are not required revert to the Treasury at the end of a year.' I do not know how you

TABLE VIII

ALLOWANCES BUDGETED FOR MISCELLANEOUS SOCIAL SERVICES FOR MILITARY PERSONNEL

Service	Amount	Page*
REENLISTMENT BONUSES		
Army	$ 12,642,000	10
Navy	15,061,000	147
USMC	9,425,000	242
USAF	18,623,000	293
Total	$[illegible]	
SEVERANCE PAY		
Army, Officers	$ 901,000	8
Enlisted	1,224,000	10
Reserves	367,500	8
Navy, Officers	1,170,000	138
Enlisted	1,773,000	141
Reserves	376,000	138
Cadets	5,000	142
USMC, Officers	509,000	240
Enlisted	532,000	245
Reserves	237,000	240
Cadets	3,000	246
USAF, Officers	3,543,000	288
Enlisted	2,772,000	293
Reserves	688,000	288
Cadets	1,000	296
Total	$ 14,105,500	
DEATH GRATUITIES		
Army	$ 2,687,000	26
Navy	1,654,000	151
USMC	507,000	247
USAF	6,500,000	333#
Total	$ 11,348,000	
LUMP SUM TERMINAL LEAVE PAYMENTS		
Army, Officers	$ 17,993,500	8
Enlisted	10,425,000	10
Navy, Officers	10,231,000	138
Enlisted	39,625,000	141
USMC, Officers	2,155,000	240
Enlisted	7,547,000	245
USAF, Officers	14,231,000	288
Enlisted	57,100,000	293
Cadets	3,000	296
	$189,321,500	

Service	Amount	Page*
EMPLOYER'S CONTRIBUTIONS TO SOCIAL SECURITY		
Army, Officers	[illegible]	[illegible]
Enlisted	55,713,000	[illegible]
Cadets	[illegible]	[illegible]
Navy, Officers	11,197,000	138
Enlisted	39,605,000	141
Midshipmen	175,000	142
Cadets	107,000	142,3
USMC, Officers	2,382,000	237
Enlisted	10,257,000	242
Cadets	21,000	246
USAF, Officers	20,575,000	288
Enlisted	52,172,000	293
Cadets	117,000	296
Total	$[illegible]	
CONTRIBUTIONS TO STATE RETIREMENT SYSTEMS		
National Guard	$2,800,000	+
Air Natl Guard	1,000,000	+
Total	$[illegible]	
INTEREST ON ENLISTED PERSONNEL DEPOSITS		
Army	$1,425,000	26
Navy	111,000	151
USMC	100,000	247
Total	$[illegible]	
EXPENSES OF MILITARY PRISONERS		
Army	$ 896,000	27
USMC	142,000	247
Total	$ 1,038,000	
TOTAL MISCELLANEOUS ALLOWANCES	$575,635,258	

*House Appropriations Hearings, Part 1. +Budget Appendix, pp. 247-8.

#Includes Air Force expenses for Interest on Personnel Deposits and Military Prisoners.

could state the position any more clearly than that."[15] Even if no military establishment had ever existed in the United States, it seems obvious that a sum comparable to military retirement pay would have to be provided by the economy in one form or another. In this area, disarmament would have little or no effect.

IV. SUMMARY

The social commitments of the Department of Defense for fiscal year 1963 budgeted under the Military Personnel appropriation are summarized in Table IX. Out of the total New Obligational Authority of $13,230,200,000 requested, more than seven billion dollars is required for military pay and allowances which are only incidental to the requirements of military power, but constitute a continuing component of social overhead whether armed or disarmed. Computing comparable civilian costs, where applicable, to supply these same services under conditions of disarmament yields an equivalent Department of Defense budgetary commitment to social overhead estimated at more than ten billion dollars.

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[15] House Appropriations Hearings, Part 1, p. 478. The Retired Pay appropriations request is discussed in detail pp. 469-500, both the $1,029,000,000 normal appropriation request, and the supplementary $30,000,000 bill to be presented separately.

TABLE IX

COMPARABLE COST TO THE U. S. ECONOMY OF SOCIAL SERVICES
BUDGETED BY THE DEPARTMENT OF DEFENSE
FOR MILITARY PERSONNEL

Pay	
Base Pay	$4,318,800,000
Incentives	461,103,120
Allowances	
Subsistence	1,164,574,900
Housing	1,940,421,000
Clothing	249,815,000
Travel	247,729,000
Miscellaneous	575,635,240
National Guard	238,500,000
Retired Pay	1,059,000,000
TOTAL	$10,255,578,260

CHAPTER III

OPERATION AND MAINTENANCE

The many and varied routine operating expenses of the Department of Defense are funded under an appropriation entitled "Operation and Maintenance," at a total cost of $11,608,800,000.[1] More than half the appropriation is specifically required to maintain ready weapons systems for military power. Billions of dollars are allotted to the operation, upkeep, repair, storage, and servicing of missiles, tanks, aircraft, warships, submarines, and all the incredibly complex and expensive impedimenta of modern warfare. Operation and maintenance must also provide for fuel, ammunition, spare parts, modifications, conversions, and supplies of every conceivable nature. It maintains stores, warehouses, schools, courts, prisons, machine shops, post offices, and a host of other facilities. In addition, it also provides for the pay and allowances of the Defense Department's 1,059,970 civilian employees all over the world.

Significant sums must be provided by this allotment for a host of social activities only incidentally related to the requirements of military power, components of social overhead which would continue to be required under conditions of disarmament. These may be subsumed under

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[1]For general discussion, see House Appropriations Hearings, Part 2, testimony of Secretary Hitch, pp. 275 ff. For individual service budgets and specific appropriations requests, see House Appropriations Hearings, Part 3: "Operation and Maintenance"; and Senate Appropriations Hearings, pp. 468-649.

CHAPTER III

VALUES AND ASSUMPTIONS

The many non-social sources controlling segments of the population of Gaston are likely under an equipoise-like social "operation not maintenance," it a local view of it/[illegible]. [1] Here come half the operationalize in an initial implies in minerals ready budgets systems for military power. Utilities of ability are utilized in the operations, system, social, energy, and providing of activities, human, already, available, industries, and all the large day energies and operation operations of energy systems. Upgrading and maintenance and also provide the [illegible], human parts, municipalities, commissions, and energies of [illegible] energy. It maintains years, maintenance, systems, [illegible], [illegible] about part activity, and a lack of [illegible] facilities. In addition, it also provides for the pay and allowance of the active [illegible] [illegible] military equipment all over the world.

Although [illegible] may be provided by this situation for a [illegible] social activity only intermittently related to the requirements of military power, consumers of social services will [illegible] to [illegible] value conditions of [illegible]. There may be [illegible] under

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1. For general discussion, see Alice Rossi[illegible] [illegible], Part 2, Institutes of [illegible] [illegible], pp. 211 ff. For institutional service budgets and social [illegible] requests, see Bruce [illegible] [illegible], Part 1: "Operation not maintenance", and [illegible] [illegible] [illegible], pp. 347-351.

the same categories employed for the discussion of Military Personnel in the previous chapter: Medical Services, Welfare Services, Civic Services, and Technical Services.[2]

Operation and Maintenance funds are obligated within the individual service budgets, and are also obligated by the Department of Defense for a number of department-wide activities of both social and military value common to all the services. Two subdivisions of the Office of the Secretary of Defense which supervise areas of social overhead for all the services and the department as a whole are the Office of the Assistant Secretary of Defense (Manpower), and the Office of the Director of Defense Research and Engineering. The Assistant Secretary for Manpower "is responsible for manpower, personnel and reserve affairs; health, medical care and sanitation; Armed Forces information and education; personnel and physical security activities; and Defense participation in emergency and continuity of Government planning."[3] The Director of Defense Research and Engineering supervises all research, development, test, and evaluation activities within the purview of the Department of Defense, discussed and justified more thoroughly in Chapter V.

The current administration, in the person of Secretary Robert S. McNamara, has placed considerable emphasis on the continuous process of improving administrative efficiency in the Department of Defense. Four areas of activity common to all the services have been removed in large measure from the individual jurisdictions of the services and placed

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[2] Supra, pp.15 for component activities.

[3] House Appropriations Hearings, Part 3, p. 615.

the main budgetary vehicle for the expansion of military research in the postwar period: "Atomic energy, rocket motors, guided missiles, jet engines, and Tomorrow's weapons."[7]

Somehow the "achievements" which are attributed within the military-industrial complex's boosters, and have been obligated by the Department of Defense for a wide range of supposedly-civilian activities of long-range and military value, never seemed to add up to much.[8] The mobilization of the office of the Secretary of Defense which supervises areas of action that have now all been assumed by the Department as a whole are the office of the assistant secretary of Defense (Comptroller), and the office of the Director of Defense Research and Engineering. The Assistant Secretary for Comptroller is responsible for budgetary, personnel and training objectives, control, law and legislation, force structure information and analysis, planning and programming and strategic mobilization and reserve policies. The Director of Defense Research and Engineering supervises all research, development, test and evaluation activities within the jurisdiction of the Department of Defense. Research and Initiative were discussed in Chapter 3.

The service establishments, in the person of Quartermaster Gen. F. Robinson, had played some important roleplay in the mobilization process of technology-intensive activities in the Department of Defense. The range of military research in all the services have been reviewed in brief manner from the individual publications of the services and global

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[7]Page, op.cit the Economic activities.

[8]Seymour Melman, Pentagon Capitalism, op. cit., p. 60.

under the supervision of a central superior for the Defense Department as a whole; these include a Defense Intelligence Agency (DIA), a Defense Supply Agency (DSA), a Defense Communications Agency (DCA), and a Defense Atomic Support Agency (DASA). Three of these four are almost entirely military in nature. The Defense Supply Agency, however, is not. Indeed, its activity is almost entirely non-military. The common activities have not been taken over in their entirety by the Department of Defense agency; each of the services retains a residual activity for those requirements unique to its particular mission. In the case of the Defense Supply Agency, the supply operations retained by the individual services consist largely of traffic in specifically military items. The supply activities which have become the centralized responsibility of DSA concern items of social overhead, which in general are the ones common to all the services, as indicated by the organization of the Agency, which consists of the following subdivisions:[4]

Medical Supply Center	Industrial Supply Center
Petroleum Supply Center	Automotive Supply Center
Subsistence Supply Center	Electronics Supply Center
Construction Supply Center	Logistics Services Center
Traffic Management Service	Property Utilization and Disposal Division
Clothing & Textile Supply Center	Surplus Sales Offices
General Supply Center	Bidders Control Office
Headquarters, DSA	

The so-called "single manager" concept within the Department of Defense has elicited considerable interest--both enthusiastic and skeptical--

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[4]Ibid., p. 771.

under the supervision of a central superior for the Defense Department, in a manner that includes a Defense Intelligence Agency (DIA), a Defense Supply Agency (DSA), a Defense Communications Agency (DCA), and a Defense Atomic Support Agency (DASA). Some of these can be almost entirely military in nature. The Defense Supply Agency, however, in contrast, its activity is almost entirely nonmilitary. The common activities now performed under cover in their relation to the Department of Defense agency; each of the services retains a residual activity for these requirements unique to its particular mission. In the case of the Defense Supply Agency, the supply operations retained by the individual services consist largely of benefits in nonmilitarily military items. The supply activities which have become the centralized responsibility of DSA consume about 75 percent, which in general are the ones common to all the services, as identified by the organization or agency which controls of the following subsystems:[4]

Medical Supply Center	Industrial Supply Center
Petroleum Supply Center	Automotive Supply Center
Subsistence Supply Center	Electronics Supply Center
Construction Supply Center	Facilities Service Center
Energy Management Office	Property Utilization and
Clothing & Textile Supply Center	Disposal Division
General Supply Center	Service Data Offices
Headquarters, DSA	Library Central Office

The so-called "Major Commodity" concept which the Department of Defense has utilized centralized, integrated--both authoritarily and executive--

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[4]Ibid., p. 771.

in Congress and the armed services, and has yet to be proven.[5] It seems apparent, however, that the routine functions presently fulfilled by DSA are ones which would be required of the economy, armed or disarmed.

A number of additional miscellaneous activities are included in the Office of the Secretary of Defense, many of them tabulated as Intradepartmental and Interdepartmental activities, which contribute to social overhead.

All of the miscellaneous activities, of course, have some military application, but, in general, are programs which would be required or desirable in one form or another whether the United States had a Department of Defense to handle them or not. The complete list, which includes such diverse activities as a Council on Youth Fitness, coordination of the U. S. Antarctic program, the Court of Military Appeals, and administration of the Petroleum and Oil Shale Reserves, is included as Appendix C, and the costs of the individual activities are included in the categorical discussion which follows, in terms of Medical, Welfare, Civic, and Technical Services.

I. MEDICAL SERVICES

Medical and dental care is provided out of Defense Department Operation and Maintenance funds not only for military personnel in military hospitals, local dispensaries, and aboard ships, but also for

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[5]For the Department of Defense position, and a detailed description of the activities of the Defense Supply Agency, see DSA pamphlet An Introduction to the Defense Supply Agency (Washington: Government Printing Office, 1962.)

in Germany and the Soviet Zone, and that yet to be given.[7] It must
therefore, however, then the visible functions presently fulfilled by the
Bundesgrenzschutz should be visible of the Government, armed or otherwise.

A number of additional intelligence activities are included in
the office of the Secretary of Defense, some of them mentioned in Inter-
departmental and Counterintelligence activities, which contribute to social
awareness.

All of the aforementioned activities, of course, have some mili-
tary implications, but, in general, are programs which could be expected
to function in the form of civilian agencies under the Defense Department
Department of Defense in peacetime than or not. The exception is, which
because such training activities in a Consult on Soviet Fleets, overview
time of the U. S. Intercept program, the Corps of Military Appeals, in
establishing of the Pentagon and all data Reserve, it instead of
Appeals, and the core of the Internal activities are limited to
the Internal Citizenship which failure, in area of Action, military
cities, and Internal Service.

C. Medical Services

Medical and dental care is provided for of Defense Department
Operation and dependents from not only for military personnel in
military hospitals, local dispensaries, and dental clinics, but also for

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[7] For the supervision of Soldier Profiles, and a medical description
and of the activities of the Defense Supply Agency, see DD Pamphlet
No Procedures of the Defense Supply Agency Washington Headquarters
Printing Office, 1961.

their dependents, in military medical facilities and elsewhere under the Dependents' Medical Care Act (the program is commonly referred to as "Medicare") which pays for certain expenses incurred by dependents of military personnel under treatment by civilian doctors and in civilian hospitals and medical facilities. Provision is also made to treat certain government officials such as the President, Members of Congress, and others, in military facilities, and to provide care for retired or disabled personnel and their dependents. Brigadier General H. W. Sloan, Army Deputy Surgeon General, in speaking for the Army in the justifications of Operation and Maintenance requests before the Congress, neatly summed up the medical mission not only of the Army, but of all the armed forces. Like the Army Medical Service, each of the military services

> . . . must continually improve and develop preventative and therapeutic medicine, it must operate and maintain modern medical treatment facilities staffed with highly trained professional personnel in all fields of medical science, and it must conduct a continuous training program for its personnel in order to keep them abreast of the latest developments in civilian and military medicine.[6]

Not only do the armed services provide medical care for military personnel and their four million dependents,[7] but they also provide it at a considerable saving over comparable civilian costs. In seeking funds for the construction of hospitals under another appropriation (see Chapter VI, Part I: Military Construction), the Navy was required to present to the Congress comparative annual cost data for military and

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[6]House Appropriations Hearings, Part 3, p. 88.

[7]House Appropriations Hearings, Part 3, p. 99; dependent strength estimates for fiscal year 1963 total 4,011,000.

civilian medical care. For obstetrical and maternity care, the ratio was more than two-to-one: $69.80 average cost per day under Medicare in civilian facilities, and $34.25 per day in the Army Hospital, Fort MacArthur and the same sum for the Naval Hospital, Long Beach. An overall table of "Comparative annual cost data for care of dependents in civilian facilities and in proposed Naval Hospital, Long Beach" yields a representative civilian cost factor of 1.73, at $59.30 estimated average cost per day in civilian facilities, and $34.25 per day in military facilities.[8] In Table X the operating expenses of the armed services for medical care funded under Operation and Maintenance are summarized. The total cost to the Department of Defense is more than $436 million, with approximately one-fifth allotted to the Navy, and two-fifths each to the Army and Air Force. With the civilian cost factor applied to determine the cost of comparable care under conditions of disarmament, the contribution to social overhead becomes $755,444,000.

II. WELFARE SERVICES

Military costs for general welfare are many and varied; activities include major programs for the education and training of individuals; religious, morale, and Chaplain services; supply support to

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[8]U. S. Congress, House, Committee on Appropriations, Military Construction Appropriations for 1963, Hearings before a Subcommittee, 87th Congress, 2d Session, printed in two volumes (Washington: Government Printing Office, 1962), Part 1: Department of the Army; Department of the Navy, pp. 288-289. For testimony on Medicare, see also House Appropriations Hearings, Part 3, p. 92, and Senate Appropriations Hearings, p. 499.

TABLE X

MILITARY MEDICAL SERVICES AND
COMPARABLE CIVILIAN COST

Service	Amount	Page*
Army Medical Activities	$264,900,000	3
Navy Medical Care	98,900,000	246
USAF Medical Support	168,300,000	390
Air National Guard Medical Support	573,000	593
Aerospace Medical Center	4,000,000	410
Total Military Cost	$436,673,000	
Civilian Cost Factor	1.73	
Comparable Civilian Cost	$755,444,290	

*House Appropriations Hearings, Part 3: "Operation and Maintenance."

TABLE 2

MILITARY SERVICE, CIVILIAN, AND
COMBINED STRENGTH DATA*

Service	Manual	Report
Army active (military)	[illegible]	1
Navy active (military)	[illegible]	2a
USAF active (military)	[illegible]	3a
All military Reserve and Guard (manual)	[illegible]	3b
Reserve civilian (manual)	[illegible]	4a
Total military (manual)	[illegible]	
Civilian (manual) [illegible]	[illegible]	
Combined (manual)	[illegible]	

*Data supplied by Service, Nov. 1[illegible] "Operation and Main-

provide for food, clothing, housing, storekeeping, disbursing, and so forth; and miscellaneous services almost too numerous and varied to itemize.

Education and Training of Individuals

Personal education of individuals, as opposed to the operational training of military units, is provided by the armed forces across a broad spectrum, nearly all of which is normal social overhead. It includes the complete college educations provided by the service academies, and subsidies through various ROTC programs to assist other young men in attaining a college education. It includes an expanding program of postgraduate studies of all varieties at both service and civilian institutions, in sciences and humanities, engineering, business and personnel administration, and medical fields. While the courses of instruction at the academies and colleges, and some of the postgraduate courses, include some purely military activity and are clearly intended to benefit the armed services in the long run, the benefit sought is not specifically in the nature of superior soldiers, sailors, or airmen, but of superior citizens whose general service and careers will benefit from broader intellectual achievement.

Job training of individuals is more specifically designed for immediate benefits to the armed services in the form of skills required in the operation and maintenance of military equipments. Like education, however, training in electronics, welding, communications, mechanics, baking, and so forth, invariably contributes to an individual's value to the armed forces in competing with private industry for the career

provide the land, training, managerial direction, labourers, and in having the administrative services which the managers may verify to theirs.

Selection and Training of Individuals

Personal counselling to individuals, as opposed to the specialized training of skilled units, is provided at the range lessons across a broad spectrum, mainly all of which is social work programmes. If the issues the complete social -counselled provided by the service workers, and monitoring through reports not provided to assign other jobs and is available a unique assistance. It includes an -operating programs of qualitative studies studies of all activities on land service and activities involved, it relates the identifies, motivation, behaviour and personnel administration, and social studies. Also the courses of instruction at the academic and training, and use of the multidisciplinary courses, lessons and qualit activity activity and the identify instead to benefit the same services in the long run, the specific groups in an specifically in the manner of specific summary, qualitative, or always, the of specific citizen when general services and services will benefit from broader institutions activeness.

The training of individual in the specifically designed for specific activity to the same activity is the form of skills training in the operation and management of activity activities. Like education, however, training is interdisciplinary, communications, economic, nation, and as fully interdisciplinary approaches on to individuals value to the social force to consider the public interest for the course

services of the men the armed forces educate and train.[9] The job skills needed in military activity are the same as those required in the civilian society; the difference is that, under conditions of disarmament, all such skills could be applied to television instead of radar, plumbing instead of aircraft hydraulics, automobiles instead of tanks, and so on. But training to develop those skills would still be required. Two industries which appear to rely heavily on military training are electronics trades, and civil aviation. Electronics ratings are invariably the most difficult for the services to retain. Similarly, the armed forces must maintain extensive training programs in aviation skills, for both pilots and technicians.

Another significant educational service provided out of Operation and Maintenance funds is the education of military dependents overseas, from kindergarten through high school. The Department of Defense provides both teachers and facilities for the elementary and secondary education of a number of students estimated at 179,648 for fiscal year 1963, at a total cost of some fifty million dollars or $285 per pupil, considerably cheaper than the comparable service in the civilian economy. This dependent education program has caused considerable comment and criticism in testimony before both houses of Congress. Witnesses representing the National Education Association have presented comprehensive data to justify their request for a significant increase in funds

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[9] See Senate Appropriations Hearings, p. 183. Air Force Chief of Staff General LeMay estimates a training investment in some skills of $25,000 per man, and a loss to private industry of four out of five.

allotted to the program. Their "Estimated cost per pupil in dependents schools, to provide program comparable to U. S. city schools" is $343.35, which yields a civilian cost factor of 1.20 when compared to the $285 per pupil allotted by the Department of Defense.[10] At the rate recommended by the National Education Association, the comparable civilian cost for dependents education overseas would be more than sixty million dollars.

Another major educational activity supported by Department of Defense Operation and Maintenance funds is the Armed Forces Information and Education program. Approximately half the program consists of the services offered by the U. S. Armed Forces Institute (USAFI), fully accredited education at the high school and college level for servicemen at a nominal fee. Mr. E. L. Katzenback, Deputy Assistant Secretary of Defense for Education and Manpower Resources, pointed out in his testimony on the Armed Forces Information and Education service that USAFI courses as of December 31, 1961, consisted of 119,781 active enrollments in correspondence courses, 140,745 in group study courses, and 13,706 participating college active enrollments.[11] The remainder of the Information and Education program consists of the Armed Forces Radio and

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[10] House Appropriations Hearings, Part 3; budget data p. 914; discussion pp. 717 ff. Testimony of National Education Association with data cited here, Part 6, pp. 259-260. See also Senate Appropriations Hearings, pp. 1668-1672, and tables following, for NEA testimony; p. 714 for discussion.

[11] House Appropriations Hearings, Part 3, p. 720. See also Senate Appropriations Hearings, pp. 714-724.

Television Service, for both education and entertainment of military personnel, at home and abroad.

Total Department of Defense obligations budgeted for the education and training of individuals is summarized in Table XI with other Welfare Services, at a sum total of more than $600 million.

Other Personnel Services

Many of the programs contributing to social overhead in terms of the general welfare of military personnel (and others) are of self-evident value irrespective of a need for armed forces. These include dependent housing; commissary stores, post exchanges, and other supply activities; sports programs, bands, recreation activities, and Chaplain services; and most of the Department of Defense interdepartmental activities. In addition, a number of welfare type activities are not isolated as such in the budget, but are included with other appropriations items; the Army, for example, includes nearly all its Welfare and Civic services under the single general category of "Operation and Maintenance of Facilities."[12] Other Welfare activities include an Employees' Compensation Fund for civilian employees within the Department of Defense (and other government agencies), supervised by the Secretary of Labor under Public Law 86-767, to provide aid in the event of death or injury. Another item proposes new legislation for obligational authority in the amount of $40,000,000 to provide more realistic per diem payments for food and lodgings of traveling military personnel.

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[12]Infra, p. 55.

Another is a small obligation for the National Board for the Promotion of Rifle Practice, which provides facilities and ammunition for civilian shooting clubs and target matches; while this program is obviously aimed at possible military applications, it also largely supports a major sports activity in the United States, not only for the enjoyment and benefit of the young people participating, but also as a contribution to national prestige in the Olympic and Pan American Games, and other international competitions.[13] The miscellaneous activities are many. Total Operation and Maintenance obligations for Welfare Services are summarized in Table XI. With a sum of more than $800 million for the support of miscellaneous social services added to the $600 million allotted to education and training of individuals, a grand total of more than one-and-a half billion dollars is obligated to military welfare.

III. CIVIC SERVICES

A good many of the Civic Services funded under the Operation and Maintenance appropriation consist of routine housekeeping requirements little related to the exigencies of military power and preparedness. The Army devotes more than a billion dollars a year to normal living expenses for its personnel, which are budgeted under the catchall appropriation title of "Operation and Maintenance of Facilities Support."

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[13] House Appropriations Hearings, Part 6, p. 245: It was noted in the statement to the Appropriations Subcommittee that $80,270 was allotted to sending an American team to the International Shooting Union World Championships at Cairo, and $46,400 for the Pan American Games in 1963, for a total of $126,670 "for the advancement of national prestige."

TABLE XI

COST OF WELFARE SERVICES PROVIDED BY MILITARY
OPERATION AND MAINTENANCE FUNDS
[in thousands of dollars]

EDUCATION AND TRAINING OF INDIVIDUALS			OTHER MISCELLANEOUS PERSONNEL SERVICES		
Title	Amount	Page*	Title	Amount	Page*
ARMY:			ARMY:		
O & M of Schools	$82,151	14	Personnel Support	$18,613	113
Military Academy	5,781	14	Admin Services	65,191	113
School Training	3,628	14	Finance & Auditing	39,800	115
Devices & Pubs	15,083	14	NAVY:		
O & M of Facilities	94,257	14	Welfare & Recreation	3,571	176
Industrial College	1,312	118	Chaplain Corps	841	177
Tuition Assistance	3,747	342+	Field Expenses	11,276	177
Reserve ROTC	14,000	1209+	Personnel Facilities	12,135	177
NAVY:			Family Housing	52,820	302
Officer Training	5,157	174	Supply Services	4,046	307
Enlisted Scientific Education Program	850	174	Logistic Support	31,842	240
Service Schools	2,702	174	Training Support	2,781	241
Functional Training	2,459	174	Supply Property O & M	13,690	306
Supporting Programs	4,400	174	USMC:		
O & M of Property	28,815	175	Troop Services	1,139	349
Reserve Training	9,400	174	Family Housing	8,187	357
Naval Academy	12,685	174	Personnel Services	6,917	353
USMC:			USAF:		
Individual Training	19,163	347	Memorial Services	1,342	392
USAF:			ANG Memorial Services	13	595
Air Training Command	215,420	394	Training Support	313,800	394
Air University	23,770	394	Special Airlift	53,655	396
Air Force Academy	15,103	394	DOD:		
Air Staff	480	394	Asst SecDef (Manpower)	1,173	615
Logistics Command	710	394	Defense Supply Agcy	177,700	743
			Support Activities	1,774	617
Armed Forces Information and Education Service	8,874	704	IntraDept Activities	226	622
			InterDept Activities	470	694
			Non-Profit Contracts	6,115	732
Overseas Dependents Education Program:			Natl Bd for Promotion of Rifle Practice	500	128
Military Cost	(49,561)	918	Employees' Comp. Fund	996	656
Comp. Civ. Cost	61,750		Proposed Per Diem Leg.	40,000	112+
TOTAL	$631,697,000		TOTAL	$871,615,000	
			ED. TOTAL	631,697,000	
Total Cost of Welfare Services Provided by O&M Funds				$1,503,312,000	

*House Appropriations Hearings, Part 3. +Senate Appropriations Hearings.

COST OF BASIC, [illegible] PROGRAMS OF [illegible]
[illegible] AS REPORTED [illegible]
(In thousands of dollars)

AUTHORIZED AND PROGRAMMED OBLIGATIONS			OTHER MISCELLANEOUS PROGRAMS, [illegible]		
Title	Actual	Page*	Title	Amount	Page*
NAVY:			[illegible]		
[illegible]	[illegible]	[illegible]	Personnel support	[illegible]	[illegible]
Military [illegible]	[illegible]	[illegible]	Medical services	[illegible]	[illegible]
Navy [illegible]	[illegible]	[illegible]	Planning & building	[illegible]	[illegible]
Service [illegible]	[illegible]	[illegible]	NAVY:		
[illegible]	[illegible]	[illegible]	Military [illegible]	[illegible]	[illegible]
Industrial [illegible]	[illegible]	[illegible]	Training corps	[illegible]	[illegible]
Inter[illegible]	[illegible]	[illegible]	Flag [illegible]	[illegible]	[illegible]
Navy [illegible]	[illegible]	[illegible]	Personnel facilities	[illegible]	[illegible]
NAVY:			Facility [illegible]	[illegible]	[illegible]
Office [illegible]	[illegible]	[illegible]	Supply services	[illegible]	[illegible]
Military [illegible]			[illegible] support	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible] support	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	Navy reserve [illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	USMC:		
[illegible]	[illegible]	[illegible]	Troop [illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	Facility [illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	Personnel [illegible]	[illegible]	[illegible]
USMC:			USAF:		
Military [illegible]	[illegible]	[illegible]	Medical [illegible]	[illegible]	[illegible]
USAF:			[illegible] medical [illegible]	[illegible]	[illegible]
Air [illegible]	[illegible]	[illegible]	Training [illegible]	[illegible]	[illegible]
Air [illegible]	[illegible]	[illegible]	[illegible] ability	[illegible]	[illegible]
Air [illegible]	[illegible]	[illegible]	USCG:		
Air [illegible]	[illegible]	[illegible]	[illegible] [illegible]	[illegible]	[illegible]
Military [illegible]	[illegible]	[illegible]	[illegible] [illegible]	[illegible]	[illegible]
			[illegible] activities	[illegible]	[illegible]
Other Defense Information			Intelligence activities	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	Intelligence activities	[illegible]	[illegible]
			Non-[illegible] [illegible]	[illegible]	[illegible]
			Not in the President		
Defense [illegible]			[illegible]	[illegible]	[illegible]
Military Pensions			[illegible] [illegible]	[illegible]	[illegible]
Military Cem	[illegible]	[illegible]	Payment [illegible]	[illegible]	[illegible]
Emp. [illegible]	[illegible]				
TOTAL	[illegible]		TOTAL	[illegible]	
			ALL OTHER	[illegible]	
TOTAL COST [illegible]				[illegible]	

*Page [illegible] Appropriations Review.

As described in testimony of expenses for two new Army divisions, this general support consists more specifically of the following:

Local Headquarters command administration.
Comprises all activities concerned with local headquarters administration functions such as installation command groups, the operation of dependent schools, finance and accounting services, postal services, preservation of order, and general educational development.

Local welfare services.
Includes local welfare and morale services such as chaplain activities, troop information, and special services.

Local maintenance and management of facilities.
Provides for real property management and such operational services as utilities, fire prevention, buildings and grounds maintenance, and sanitation.

Field maintenance.
Provides for field maintenance of troop equipment and installation operating equipment. This service is performed in fixed or semimobile shops and is generally confined to repair and replacement of unserviceable parts and assemblies of equipment to be returned to the user, station, or maintenance float.

Local logistic services.
Provides supply, communication and pictorial, transportation, and quartermaster specialized services such as post supply, communications, movement services, and the operation of commissaries, bakeries, laundries, and food-processing facilities.[14]

Since the other services list many of their welfare costs separate from such housekeeping expenses, the funds they budget for "Operation and Maintenance of Facilities" are considerably less than those of the Army, and may be considered more strictly Civic expenses. The Army National Guard Operation and Maintenance appropriation (less certain expenditures budgeted for air defense) is considered a Civic

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[14] House Appropriations Hearings, Part 3, p. 41.

or involved in business or commerce for the sole and exclusive benefit of private owners or with some commitment of the individual.

Local government income maintenance.
Operations and activities associated with local bookkeeping, administration functions such as recordkeeping, income tax, the collection of taxes, utilities, finance and accounting, services, postal services, preservation of order, and general municipal functions.

Local welfare services.
Includes local welfare and social services and as complete activities, group institutions, and criminal services.

Local maintenance and management of facilities.
Provides the very property management and such operational services as utilities, fire prevention, building and grounds maintenance, and recreation.

Fire protection.
Provides for fire maintenance of large equipment and facilities according equipment. This service is performed in lieu or necessary when and is generally continued to equipment of manufacturing, power and transmission of equipment to be provided to the user, stations, or maintenance line.

Local public services.
Provides supply, transportation and distribution, telecommunication, and maintenance specialized services such as post supply, communications, consumer services, and the operation of cemeteries, markets, industries, and food-processing facilities.

Since the above activities list many of their activities which are made from such transactions expended, the State has budget for "activities and functions of facilities" are constantly long term of the city, and may be considered more strictly civil expenses the city political their institution and maintenance appropriation (see certain expenditures included for the "Lines") is considered a list.

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[1]Japan Administration Statistics, Part-1, p. 111.

cost in its entirety, since the National Guard's domestic peace-keeping function[15] would be little affected by disarmament.

Another area of significant Civic obligation is the support of flying performed by the armed forces which is not strictly military in nature. It can be demonstrated (see Chapter IV: Procurement) that some 21.1 per cent of military flying results from the requirements of social overhead, for such missions as Search and Rescue, Hurricane and Weather Reconnaissance, Charting and Aerial Photography, and the routine transportation of both passengers and cargo. The Operation and Maintenance Costs to support this administrative flying are considerable.

The scope and variety of miscellaneous minor contributions to Civic social overhead vying for Operation and Maintenance funds is so comprehensive as to defy complete or orderly identification. As noted with respect to Army Operation and Maintenance of Facilities Support, variations in budgetary procedure and appropriations language among the individual armed forces complicate the attempt to isolate total Department of Defense obligations by arbitrary categories. However, a number of specific programs may be identified. Examples are the Navy's operation and administration of the Petroleum and Oil Shale Reserves, contributions to the infrastructure program of the North Atlantic Treaty Organization (for projects such as airfields, docks, and pipelines which are built for military contingencies should an emergency develop in Europe, but are available to the host country for normal operations in

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[15] Supra, pp. 15-16.

that is the industry which the national economy's dynamic growth-supporting potential[1] seems to initially attribute to transportation.

Another area of significant joint consideration is the support of rights-conscious life and social cohesion which is the critical utility sector makes. It can be demonstrated (see Chapter IV) that non-full gas task of achieving rights-conscious life the requirements of social cohesion, for plus abilities to secure and serve, functions and basic necessitations. Certain the social rights-living, and the realize cross-portations to this requirement are unique. The operations and maintenance shall be support life-consciousness living or consideration.

The cross-sector matrix of interdependence shows considerations to civil social cultural value for functions and maintenance. Water is so contributing it to only provide or energy functionalities. Or water also provide to free operation and maintenance of facilities support, particular to increasing processes and operationalize supports among the investment sector. Income consideration the attempt to public local government and of cities to functions by existing energy supplies. Energy, a number of facilities provide and be sustained. Supports and the Energy system time and contributing of the provisions and all local measures, consideration to the international pressure of the Metro atlantic energy organization (the [illegible] work of activities, social, the planning among the basis for activity independent energy or [illegible] having to become, that are necessary to the main energy for social operations is

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[1]Supra, pp. 12-14.

the meantime), and construction and Civil Engineer support; Air Force support for the Military Air Transport Service, discussed more fully in Chapter IV; and the Army's expenses in handling the Alaska Communications System, the Alaskan telephone network which was built originally by and for the armed forces, but which is gradually being turned over to civilian control for the normal use of the civilian community in Alaska;[16] plus a host of other minor miscellaneous programs sponsored by the armed services and Department of Defense agencies. Table XII is a summary of the identifiable obligations for Civic Services funded by the Defense Department under Operation and Maintenance, at a total sum of some two-and-a-half billion dollars.

IV. TECHNICAL SERVICES

Like Operation and Maintenance in other categories, support of Technical Services includes a variety of programs, including such major activities as the Army's Mapping and Geodesy Service, and the Air Force's weather, chart, and flight service systems. Also included are portions of the support for two major programs of exploitation, one the national Oceanographic program and the other the work in Antarctica.[16] Most of the technical activities of the Department of Defense are funded elsewhere in the budget, primarily under "Research, Development, Test, and Evaluation" (see Chapter V), so that the Operation and Maintenance

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[16]For discussion of the National Oceanic Program, see House Appropriations Hearings, Part 3, pp. 335-339; for the program in Antarctica see Senate Appropriations Hearings, pp. 527-533.

TABLE XII

COST OF CIVIC SERVICES PROVIDED BY MILITARY
OPERATION AND MAINTENANCE FUNDS

Title	Amount	Page*
ARMY:		
O & M of Facilities		
Operating Forces	$ 786,700,000	16
Supply Activities	222,159,000	68
Overhaul Activities	1,002,000	69
Army-wide Activities	56,851,000	111
Joint Projects	10,855,000	116
Alaska Communications System	6,900,000	136
Washington, D. C. Support	1,857,000	119
NAVY:		
Station O & M		
Weapons and Facilities	289,815,000	182
Fleet Support Facilities	111,456,000	242
MSTS and Coast Guard Support	19,080,000	240
NATO Infrastructure Contributions	1,049,000	185, 307
Civil Engineering Support	86,680,000	177
Judge Advocate General	918,000	320
Contingencies	5,929,000	320
Petroleum and Oil Shale Reserves	3,000,000	320
USMC:		
Station O & M	64,764,000	347
Depot O & M	25,428,000	349
USAF:		
Installation Support	113,222,000	394
Base O & M, MATS	112,756,000	396
Air Chart and Information Service	30,681,000	396
DOD:		
Court of Military Appeals	455,000	691
Claims	19,000,000	900
Contingencies	15,000,000	904
Electronics Resources Program	341,000	623
Management Information Studies	250,000	625
Reserves for New Projects	114,000	696
Administrative Flying Support:		
USAF: 21.1% of $1,114,389,000	235,136,000	392
NAVY: 21.1% of 187,384,000	39,538,000	180
Army National Guard	146,100,000	141+
TOTAL	$2,407,039,000	

*House Appropriations Hearings, Part 3. +Ibid., Part 6.

TABLE-XIX

LIST OF LOCAL CONTROL MECHANISMS OF MILITARY
OPERATIONS IN FOUR SMALL TOWNS

Type	Number	Percent
Army:		
2 A & M Div. Units		
Operating Forces	2,780,000	36
Depot activities	160,000,000	20
Training Activities	1,000,000	99
Army-wide activities	50,000,000	111
Joint Projects	40,000,000	101
Other Construction Group	6,000,000	24
Evaluation, or C. Branch	2,000,000	111
USAF:		
Section 2 &		
Support for Training	60,000,000	104
Other Support Activities	100,000,000	342
Acts and Cost Data Support	1,000,000	320
Base Transportation Coordination	1,000,000	104
Civil Engineering Support	40,000,000	111
Base Accounts Control	920,000	320
Contingencies	3,000,000	101
Funding for Civil Engineering	1,000,000	320
USCG:		
Section 2 &	60,000,000	107
Bases 2 &	60,000,000	104
USDA:		
Natural Resource Support	111,000,000	104
Sec. 2 & 3, USFS	111,000,000	300
Use Data on Technical Service	30,000,000	300
DOD:		
Cost of Military Assets	850,000	101
Cards	12,000,000	300
Contingencies	4,000,000	300
Electronic Monitoring Program	300,000	32
Commercial Contracting Costs	30,000	352
Expenses in the Service	10,000	300
Environmental Civil Engineering		
USDA: 2 & 3 of Military Assets	300,000,000	102
Army Engineers Civil Works	70,000,000	320
Army Engineers Cost	100,000,000	1417
TOTAL	1,000,000,000	

*Data collected from Interviews, Sect. 2. "TOTAL", Sect. 3.

contribution to social overhead is considerably smaller in terms of Technical Services than in other areas, as indicated in Table XIII. Technical activities are summarized in Table XIII at a total of approximately $130 million.

TABLE XIII

COST OF TECHNICAL SERVICES PROVIDED BY MILITARY OPERATION AND MAINTENANCE FUNDS

	Title	Amount	Page*
ARMY:	Mapping and Geodesy Service	$ 45,300,000	114
NAVY:	Office of Naval Research Support	9,649,000	320
USAF:	Weather Service	6,828,000	397
	Flight Service System	1,690,000	397
	FAA Inspection of Navigation Aids	700,000	206
DOD:	Office of Director of Defense Research and Engineering	8,435,000	611
	Coordination of Antarctic Program	116,000	624
	Federal Radiation Council	8,000	694
	National Oceanographic Program	57,100,000	335
	TOTAL	$129,826,000	

*House Appropriations Hearings, Part 3.

appropriation to which includes intermediary matter in terms of Federal service that is other work, is included in Table XIII. Federal activities are presented in Table XIII as a total of approximately $125 million.

TABLE XIII

COST OF FEDERAL SERVICES PROVIDED BY MILITARY
AGENCIES TO NATIONAL PARKS

Code	Title	Amount	Page*
A000	Legislative and judicial services	$ 20,320,000	110
B000	Office of Vice President support	3,240,000	120
D000	Military assistance	6,780,000	207
	Flight service program	1,800,000	327
	The Department of Agriculture also	700,000	326
X00	Office of Director of Defense		
	Research and engineering	5,400,000	611
	Office Director of Defense Programs	110,000	620
	Federal Emergency Council	6,000	625
	Military Assistance Program	77,000,000	153
	Total	$125,356,000	

*Page References Budget, Part 1.

V. SUMMARY

The commitment of the Department of Defense to responsibilities for social overhead budgeted under the Operation and Maintenance appropriation is summarized in Table XIV. Of the total New Obligational Authority of $11,868,800,000 requested for Operation and Maintenance of Defense Department activities, not quite half is devoted to the support of programs and activities for which funds would have to be made available in the U. S. economy irrespective of the requirements of military power or disarmament, including such major items as medical care, education and training, general welfare, and routine housekeeping. The total of $4,795,621,000 for social services includes the fact that some of these services are more expensive under conditions of disarmament, i.e., as available on the civilian market.

TABLE XIV

COMPARABLE COST TO THE U. S. ECONOMY OF SOCIAL SERVICES BUDGETED BY THE DEPARTMENT OF DEFENSE AS OPERATION AND MAINTENANCE

Medical Services	$ 755,444,000
Welfare Services	
Education and Training	631,697,000
Other Personnel Services	871,615,000
Civic Services	
Housekeeping	1,795,008,000
Administrative Flying	274,674,000
Miscellaneous Services	337,357,000
Technical Services	129,826,000
TOTAL	$4,795,621,000

F. SUMMARY

The assistance of the Department of Defense in reconstructing for social purposes facilities and the operation and maintenance activities provided is summarized in Table XIV. In the total Non-Military Authority of $11,[illegible] expended for operation and maintenance of Defense Department activities, not quite half is devoted to the support of programs and activities for which Defense would have to do so anyway, that is the U. S. Armed Forces requirements of military power or disarmament, including such major items as medical care, education and training, general welfare, and public transportation. The total of $[illegible] for social purposes includes the last two of these activities and more expensive cases involving disarmament, i.e., the activities on the civilian side.

TABLE XIV

COMPARATIVE COST OF THE U. S. DEPARTMENT OF DEFENSE
ACTIVITIES BY THE DEPARTMENT OF DEFENSE
AS OPERATING AND MAINTENANCE

Medical Services	$ 785,[illegible],000
Military Support:	
Education and Training	[illegible],000
Other Economic Assistance	[illegible],000
Civic Services	
Transportation	[illegible],000,000
Rehabilitation Grants	[illegible],000
Miscellaneous Services	[illegible],000
Technical Services	[illegible],000
TOTAL	$[illegible],000

CHAPTER IV

PROCUREMENT

The functional category of the Department of Defense budget for fiscal year 1963 to which most of the defense funds are obligated is titled "Procurement." It is also the component of the budget in which the cost of military power is most impressively demonstrated. The weapons systems of modern warfare are incredibly expensive, and have consumed an ever-increasing portion of the Defense budget over the years. In addition, the current political problems of subversion and guerilla warfare have resulted in a build-up of conventional forces, adding considerably to the cost of military Procurement, amounting this year to a total of $16,445,000,000.

There are a number of items, however, which must be purchased by the armed forces under this allotment to provide for social overhead. Listed under General Support on the armed forces' shopping lists are literally millions of items such as medical and dental supplies, civil engineering equipment, shoes, stoves, refrigerators, ambulances, and many other items which the economy would be required to provide even if disarmament should relieve it of the requirement to provide weapons and ammunition.

Procurement funds are budgeted by the Army, Navy (which also handles Marine Corps Procurement), Air Force, and Defense Agencies within the following general categories:[1]

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[1]For Congressional consideration of Defense-wide procurement, see

CHAPTER II

PROGRESS

The functional analysis of the importance of science dates back to about year 1970 to which most of the nations found by solidarity in africa (Francophone). It is also the development of the budget in which the work of military power is most importantly predominant. The modern problem of modern warfare are increasingly expensive, and have rendered the two-superpower position of the nations ranked over the globe. In addition, the various political problems of subversion and guerilla warfare have resulted in a multitude of conventional forces, adding considerably to the cost of military requirements, amounting this year to a level of [illegible].

There are a number of items, however, which must be purchased by the armed forces since this withdrawal is provide for social services. Other items which should consist on the armed forces/ shopping list are internal utilities of bases such as electricity and general supplies, civil engineering activities, [illegible], military[illegible], medicines, and many other items which the armedy should be requires to provide and [illegible] [illegible] nation is of the requirements to provide weapons and munitions.

Procurement funds are designed by the Army, Navy (which also includes marine corps requirements), air force, and defense agencies within the [illegible] general [illegible].

For Congressional consideration of [illegible] programs, see

Aircraft	$5,488,000,000
Missiles	4,011,000,000
Ships	2,982,000,000
Other Procurement	3,964,000,000

I. AIRCRAFT

The great majority of aircraft purchased for the armed forces are purely military in nature: interceptors, bombers, tankers, close air support craft, and the like. Cargo and transport aircraft (and many patrol aircraft) fulfill a dual purpose. On the one hand, they contribute to the military prowess of the United States by enhancing the mobility of troops and performing other military tasks; on the other, they provide such social services as search and rescue; hurricane tracking and weather reconnaissance; mapping and aerial photography, special transportation for the President, other high officials, and overseas U. S. Embassies; routine passenger and cargo transportation for thousands of military personnel and their dependents, and tons of equipment and cargo, including U. S. Airmail; and such periodic special missions as earthquake and disaster relief, and support of United Nations operations in the Congo. In addition, a small number of unique special air test vehicles contribute to scientific advancement in aeronautical research and development. Less obvious are the contributions military aircraft procurement makes to aviation in general, civil and military, in terms of providing training aircraft and prototypes, and in terms of decreased overall costs of aircraft resulting from program expension. Rear

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House Appropriations Hearings, Part 2. For consideration of budget requests of the individual services, see Part 4: "Procurement."

Admiral P. D. Stroop, Chief of the Bureau of Naval Weapons, noted in his testimony before the House Subcommittee, for example, that if both Air Force and Navy were to buy a certain type of airplane, instead of just the Navy alone, it would reduce the unit price for the craft by $255,000.[2] Hitch and McKean, in their authoritative work on the economics of defense, note a similar effect on the civilian economy, not only in aircraft procurement, but with ships as well:

> The purchase of airplanes and ships, by increasing the scale of operations in these industries, makes it possible for airlines and shipping companies to get their equipment at lower cost. This happens because shipbuilding and aircraft manufacturing are "decreasing cost" industries over the relevant range of output. Within this range, the larger the output of a particular model, the lower its unit cost; and the larger the scale of operations in general, the cheaper certain inputs are for any additional models.[3]

Significant as this contribution may be, no meaningful statistics are available whereby a realistic civilian cost factor could be computed for overall aircraft procurement. Lacking this, estimates of the lasting social value in the event of disarmament of aircraft presently military can only be approximated in terms of actual aircraft costs as budgeted by the armed forces. The Air Force submits its aircraft requirements in terms of:[4]

1. Combat Aircraft
2. Airlift Aircraft
3. Trainer Aircraft

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[2]House Appropriations Hearings, Part 4, p. 180.

[3]Charles J. Hitch and Roland N. McKean, The Economics of Defense in the Nuclear Age (Cambridge: Harvard University Press, 1960), p. 82.

[4]House Appropriations Hearings, Part 4, p. 316.

Admiral T. S. Combs, chief of the Bureau of Naval Weapons, added to his testimony before the Gates Commission, for example, that if both the Navy and Army were to lay a certain type of airframe, instead of two the Navy alone, it would cause the Navy price for the aircraft to be $250,000.[5] Given the reason, in their perspective were on the commencement of Vietnam, such a saving either in the civilian economy, not only in aircraft procurement, but also also as well:

> The purchase of aircraft can achieve, by increasing the scale of operations in some industries, which is helpful for getting the initial companies to get their equipment at lower cost. But, because because subcontracting and aircraft manufacturing are increasingly more interdependent with the relevant scale of output within this range, the larger the output of a particular model, the lower its unit cost; and the larger the scale of operations in general, the cheaper certain inputs are for any individual firm.[6]

Significance of this contribution may be, to manufacturer statistics are available — showing a relatively civilian cost factor which is comparable for aircraft industry procurement. Looking only, estimates of the leading model which is the cause of disagreement of aircraft generally military can not be approximated. A total of total aircraft cost is comparable by the same issues. The Air Force assembly the aircraft requirements in three ways:

1. Normal Aircraft
2. Advanced Aircraft
3. Tactical Aircraft

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[5]Hearings Procurement Practices, Part 1, p. 100.

[6]Charles L. Schultze and Edward R. Sammer, The Economics of Defense in the Nuclear Age (Cambridge: Harvard University Press, 1960), p. 85.

[7]Hearings Procurement Practices, Part 1, p. 141.

4. Other Aircraft
5. Modification of Inservice Aircraft
6. Replenishment Spares and Spare Parts
7. Other Support

Aircraft procurement costs which would be obviated by disarmament appear largely in the first two categories, Combat and Airlift aircraft, along with a share of modifications, spare parts, and support in the last three categories, a total area in which nearly ninety per cent of the funds are obligated. The Other Aircraft category consists of light planes, helicopters, and special configurations. Trainer Aircraft, comprising category number three, certainly contribute significantly to the military power of the United States in the long run, but by the same token contribute significantly to the entire field of civil aviation in the long run by providing the training for the great number of military pilots who find careers in commercial civil aviation upon completion of their obligated military service; if disarmament should obviate the training function of the military establishment, it seems likely that the cost of training aircraft would have to be supplied elsewhere in the economy for U. S. civil aviation to continue to prosper. Similarly, even the Airlift category, which is largely military, makes a significant contribution to the civilian economy as well. Lieutenant General J. W. Kelly, Commander of the Military Air Transport Service (MATS), responsible for military airlift, described the MATS mission in his statement to the Congress. Along with the purely military functions of troop mobility and missile program support, he notes MATS contributions to such programs as Project Mercury, the manned space flight program, and Operation Deep Freeze, the mission in Antarctica, and concludes:

4. Other airports
5. Facilitation of civilian airport
6. Regional/local carrier and cargo aircraft
7. Other reports

aircraft procurement zone which could be utilized by alternative square
largely in the field of transport, tanker and airlift aircraft, along
with a share of modifications, spare parts, and support in the last
three categories, a total area in which security clearly per year of the
funds are obtained. The other aircraft category consists of light
planes, helicopters, for special conditions. Civilian Aircraft,
comprising cargo zone area, certainly available significantly to
the military zone or the outer zones in the long run, and by the end
have contracts significantly on the civilian field of civil aviation in
the case, we by providing the training for the crew member of military
pilots who flies aircraft. In conclusion civil aviation upon completion of
their military airlift service, if Government should devote the
economic function of the military capabilities, it most likely that
the cost of training aircraft crew can be as regular aircraft in the
second use of a civil aviation to continue to prepare. Lastly,
even the airlift category, which is largely military, some a significi-
cant contribution to the civilian economy as well. Lieutenant General
A. F. Ruff, commander of the Military Air Transport Service (MATS),
responsible for military airlift, described the MAT mission in all
elements to the Congress. Along with the purely military functions of
troop mobility and airlift program support, he could not contribution
to such programs as foreign aid, the Peace Corps, Flight programs,
and Operation Deep Freeze, the airlift in Antarctica, and conclusion

> . . . . In addition, each of our services, Weather, Air Rescue, and Photographic and Charting, fly specialized missions supporting Department of Defense activities. Weather reconnaissance flights provide important weather data for Air Force tactical operations as well as supporting specialized projects of NASA. Air Rescue responds not only to military requirements but wherever and whenever mercy missions are required. Our Photographic and Charting Service provides accurate mapping detail not only to the military, to other U. S. Government agencies, but also to our allies. Typical are recent surveys being provided to our sister nations in South America--Colombia and Peru.[5]

General Kelly, in discussing the MATS airlift mission, projects into fiscal year 1963 his estimate that approximately forty per cent of the MATS flying effort will be committed to routine logistic support. Totaling forty per cent of the cost of Airlift Aircraft with the cost of Trainer and Other Aircraft, with a prorated portion of modification, spares, and support funds, indicates that approximately twenty per cent (21.1 per cent) of the Total Obligational Authority (TOA) requested by the Air Force for aircraft procurement is devoted to social overhead; in

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[5]House Appropriations Hearings, Part 3: "Operation and Maintenance," p. 524. General Kelly and General Merrell, Director of the Air Force Budget, discuss the MATS airlift program with the House Subcommittee in considerable detail, including use of civil aircraft, cost of Congo operations, missions and types of aircraft, etc. See also U. S. Congress, Senate, Committee on Armed Services, Military Procurement Authorization, Fiscal Year 1963, Hearings Before the Committee, 87th Congress, 2d Session, on S. 2734 (Washington: Government Printing Office, 1962); p. 131 cites twelve Air Force WB-50's and thirteen WV's, Navy Lockheed Constellations--all multimillion dollar aircraft--involved in weather operations; ibid, p. 151 cites the purchase of three "special mission" C-135's--the military equivalent of the Boeing 707 jet transport--for VIP flights, with a fourth on order. Drew Pearson, in his syndicated column for July 27, 1962 ("The Washington Merry-Go-Round: Jackie Kennedy's Danger Up," The Washington Post, p. C23) claims in his customary flamboyant style that the Air Force maintains 719 such "special mission" aircraft, and the Navy 117, citing Representative Flood of Pennsylvania as his source.

terms of budgeted New Obligational Authority (NOA) the figure is $661,485,000. Comparable figures for the Army and Navy (including Marine Corps) aircraft procurement requests are $45,998,000, and $450,485,000 respectively.[6] In addition, Secretary Hitch has indicated that some $66 million will be obligated to "provide spares and modifications for aircraft assigned to the support of the research and development program"[7] for a total $1,223,968,000 in the procurement of aircraft obligated to social overhead.

II. MISSILES

More than four billion dollars is obligated to the purchase of missiles of all types by the armed forces, from mighty intercontinental boosters to small air-to-air rockets. Nearly all of this requirement is military in nature. While some of the missiles purchased under this category are used eventually in scientific space exploration, the armed services which provide such rockets to the National Aeronautics and Space Administration are duly reimbursed by NASA, resulting in no net expenditure charged to the Department of Defense. Like aircraft and ships procurement, the military missiles program unquestionably contributes significantly to the overall scientific space program of the

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[6]House Appropriations Hearings, Part 2; Table 14 accompanying Comptroller Hitch's presentation to the Congress (facing p. 294) lists NOA for aircraft for each service, from which these figures were computed. It was necessary to compute the percentage in terms of TOA because the Air Force breakdown by type aircraft was presented in TOA to the Congress; see Part 4, p. 316. The total obligation for the Air Force amounts to $808,191,000, which interpolates to the figure quoted here when converted to NOA.

[7]Ibid., Part 2, p. 281.

United States but the contribution cannot be realistically isolated for consideration under conditions of disarmament. The single space program funded entirely by the armed forces and identifiable as a social contribution is the Navy's TRANSIT program for a navigational satellite, for which $14,300,000 of the Procurement funds is obligated in 1963.[8]

III. SHIPS

The 1963 Ship Construction and Conversion program, funded at nearly three billion dollars, includes obligations for the purchase of thirty-seven new vessels, ranging in size from aircraft carrier to gunboat, as well as major conversion of thirty-five others. Of these, three new vessels and two converted ones fulfill functions only incidentally military: Secretary Hitch notes an obligation of $58 million under this allotment "to construct two oceanographic research ships and one surveying ship, and to convert two technical research ships."[9] In addition to this specifically social investment, the Navy, in all of its hips, provides homes--literally--for more than a hundred thousand ns, complete with sleeping, dining, working, and recreational Indeed, major U. S. Naval vessels are self-contained float- including utilities, stores, hospital and dental ice, churches, and so forth, sufficient to sustain to four thousand in number, on deployments

earings, Part 2, p. 282. See also Senate
Hit 179.
App

level of budgetary and intergovernmental harmony (sic) the figure is $[illegible]. Comparable figures for the army and navy (including marine corps) aircraft procurement requests are $[illegible] and $[illegible], respectively.[2] In addition, necessary which has indicated that some $[illegible] million will be obligated to provide spares and modification for aircraft assigned to the support of the research and development program,[1] for a total $[illegible] in the procurement of aircraft obligated to civil agencies.

II. MISSILES

Even then Lower military orders it obligated to the purchase of missiles of all types by the armed forces, from simply intercontinental ballistic to small air-to-air rockets. Nearly all of this requirement is military in nature. While some of the missiles purchased under this category are later eventually in scientific space exploration, the armed services which provide such rockets to the National Aeronautics and Space Administration are only reimbursed by NASA, resulting in no net expenditure charged to the Department of Defense. Like aircraft and other commodities, the military missile program underwent considerable fluctuation in the overall scientific space program of the

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[1] Hearings, Part 1, p. 281.

[2] Hearings, Part 1, p. 281.

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[8] House Appropriations Hearings, Part 2, p. 282. See also Senate Appropriations Hearings, p. 779.

[9] Ibid., p. 282.

which may last up to nine months. If disarmament were to obviate a sea-going Navy, the economy would have to provide alternative living accommodations for the citizens presently comprising that Navy.

It is virtually impossible to isolate, in the cost of a newly-constructed ship, just how much steel and expertise has been devoted to the necessities of housekeeping, and how much of it has been expended in providing the accouterments of military power. Experts in the Navy Department's Bureau of Ships will not even try. An accurate estimate can be made, however, from the comparable cost to the Navy of constructing 'APL' barges, which are designed solely for berthing and messing of personnel, and often include other social and recreational facilities such as stores, libraries, or barber shops. These vessels contain no armament, no source of propulsion, nor any navigational, electronic, or operational equipment; they are solely floating barracks, designed for use as temporary living quarters where facilities ashore are not available. The hypothetical cost to the Navy of a number of APL's sufficient to house the crews of the new vessels funded for construction should approximate the portion of the total cost of those new vessels which has been expended in the social requirement to provide living accommodations for the number of citizens employed in their crews. The total complement of personnel to be housed aboard the thirty-seven new vessels included in the 1963 budget,[10] as supplied by the Office of the Chief of

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[10]The ships are listed in Ibid., p. 293, Table 12 of Secretary Hitch's statement. See also Admiral Griffin's statement, Senate Appropriations Hearings, pp. 787-789.

Naval Operations, is approximately eleven thousand (10,993). APL's are designed to accommodate a maximum of 686 persons; except in extraordinary circumstances, however, they are normally limited to 350 to 400 personnel for comfort and habitability. At a median number of five hundred men per APL, and an average cost of four million dollars per APL, the comparable cost of housing the crews of new construction vessels comes to approximately eighty-eight million dollars.[11] This, then, is an indication of the cost of building into new warships the normal habitability requirements of social overhead.

IV. OTHER PROCUREMENT

The general category of Other Procurement provides for the purchase of literally millions of items of every conceivable nature, for a total obligation of $3,964,000,000. The great bulk of this obligation is applied to the procurement of items of military value only. A significant sum, however, applies to the purchase of supplies required by social overhead. Unfortunately for purposes of analysis, the armed forces' itemized shopping lists are classified, hence not available for public item-by-item investigation. Procurement costs, however, are discussed in general categories by each of the armed services to its justifications before the Appropriations Subcommittees, and Comptroller

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[11]Data on APL's from the Ships Division of the Design, Shipbuilding and Fleet Maintenance Branch of the Bureau of Ships of the U. S. Navy Department. APL costs vary somewhat with builder and modifications; in addition, none have been constructed in more than ten years, so that actual past costs were converted by the Bureau of Ships into 1963 prices for a more accurate approximation of current costs.

Hitch in his presentation of the budget to Congress summarizes in sufficient detail to determine a reasonably accurate division of procurement costs by military and social value.

The great bulk of Other Procurement is obligated to items of military value only: ground equipment for bombers and missiles, bomb alarm, air defense, and submarine detection systems, and a huge allotment of more than two and a half billion dollars for General Purpose Forces, including ammunition, small arms, artillery, combat vehicles for the Army; torpedoes, anti-submarine equipment, communications, bombs, small arms, ammunition and combat vehicles for the Navy and Marine Corps; and for the Air Force, bombs, ammunition, ground support, and communications and electronics equipment.[12] All these requirements, and others of similar military value, are emphasized in the testimony of both civilian and military officials presenting justifications for the armed services' requests. Far smaller, but still significant amounts are included for such items as non-combat support vehicles--sedans, ambulances, fire trucks, etc.--civil engineering and construction equipment, training supplies, medical equipment and supplies, and support items for research and development programs. Hitch concludes his summary of overall Department of Defense Other Procurement requirements with two categories of primary social value:

> (6) Research and development: $46 million to provide support for the research and development programs, including such items as administrative vehicles, common supply items, etc.

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[12] House Appropriations Hearings, Part 2, p. 282; also Senate Appropriations Hearings, p. 117.

which is the precondition of the ability to improve economically the material living level of a community a reasonably reasonable division of personnel and ability by utility and social value.

The great bulk of labor requirements is satisfied by large or utility value unit: general employment for foodstuffs and materials, land clothing, air vehicles, the subsidiary service industries, and a high ratio of work that can use a unit utility value. Industrial Engineering (forms) involving manufacture, small arms, utility, medical services for the Army Intendant, anti-aircraft equipment, communications, radio, well with assembling and medical supplies for the Army and Navy Corps and for the Air Force, Boats, transportation, ground support, and communications and air transport employed.[14] All these requirements, and which of utility utility value, are dependent on the availability of both civilian and military activity producing qualifications for the armed services' consumers. For medical, the well-qualified women are required for work there as non-commissioned support medical-nursing, medicine, this school, pre-civil engineering and conservation employment, Lawyers, security/medical employment and equipment, and support time for research and investigation properties. Which involving air memory of pre-all engineering and of Science other professional requirements also the conditions of technical and skill values.

(1) Research and development. The ability to provide support for the research and development programs, including such tasks as scientific activities, modern supply items, etc.

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[14] Army Industrial Design, Part 1, p. 201 Army Ordnance Industrial Service, p. 112.

(7) General Support: $745 million for a variety of equipment and materiel, including communications and intelligence equipment, support-type vehicles, training aids and equipment, materials handling equipment, and medical supplies.[13]

V. SUMMARY

The commitment to social overhead of the Department of Defense for fiscal year 1963 budgeted under the Procurement appropriation is summarized in Table XV. Out of a total New Obligational Authority of $16,445,000,000 requested, more than two billion dollars is devoted to the purchase of Aircraft, Missiles, Ships, and Other Procurement items for which funds would have to be made available in the U. S. economy irrespective of the requirements of military power or disarmament.

TABLE XV

COMPARABLE COST TO THE U. S. ECONOMY OF SOCIAL OVERHEAD ITEMS BUDGETED FOR PROCUREMENT BY THE DEPARTMENT OF DEFENSE

Aircraft	
Army	$ 45,998,000
Navy	450,485,000
Air Force	661,485,000
R & D Support	66,000,000
Missiles	14,300,000
Ships	
Technical and Research Ships	58,000,000
Quarters in Warships	88,000,000
Other Procurement	
R & D Support	46,000,000
General Support	745,000,000
TOTAL	$2,175,268,000

[13]Ibid.

(2) General support. (2) Utilize for a variety of operations and activity, including communication and logistics equipment, support-type vehicles, training aids and devices, material handling equipment, and medical supplies.

V. SUMMARY

The requirement is social security of the Department of Defense for fiscal year 1951 logistical assist the procurement appropriation is summarized in Table IV. Use of a total dam logistical authority of $10,111,000,000 requested, more than the utilize funds is summed to the purchase of aircraft, missiles, ships, and other procurement items for which funds must have to be made available in the U. S. research investment is the availability of military power in development.

TABLE IV

SUMMARY, BASED ON THE U. S. SUMMARY OF SOCIAL SECURITY ITEMS REQUIRED FOR PROCUREMENT BY THE DEPARTMENT OF DEFENSE

Activity	
Army	$ 15,000,000
Navy	20,000,000
Air Force	40,000,000
U.S. - support	20,000,000
Military	15,000,000
Navy	
Air	
Technical and research ships	20,000,000
Operations in Korea	20,000,000
Other procurement	
U.S. - support	15,000,000
General support	10,000,000
Total	$111,000,000

CHAPTER V

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION

Department of Defense funds obligated to Research, Development, Test, and Evaluation (RDT&E, or, more commonly, R&D) constitute, almost entirely, a highly desirable contribution to social overhead in the amount of $6,843,000,000. While the purchase, stockpiling, operation, and maintenance of weapons and equipments may prove to be an economic waste which could be obviated by disarmament, investigation of their components, principles of operation, behavior, power, technical feasibility, and so forth, is not. Any endeavor which advances the sum total of human knowledge and experience can contribute to the welfare of mankind, irrespective of its source, and in spite of the intent of the sponsor. Research and development funded by the Department of Defense is unquestionably aimed at enhancing the military power of the United States. At the same time, however, it results in what Hitch and McKean, in their Economics of Defense in the Nuclear Age, call "spillover benefits to private sectors of the economy."[1] Since, by the nature of the task, scientists engaged in R&D are not ever sure what they may learn or develop, scientific work sponsored by the Department of Defense for military purposes almost invariably leads off into areas of great non-military significance. Hitch and McKean comment on this dual yield of military expenditures for research and development as follows:

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[1]Charles J. Hitch and Roland N. McKean, The Economics of Defense in the Nuclear Age (Cambridge: Harvard University Press, 1960), p. 61.

CHAPTER V

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION

Department of Defense funds spent in research, development, test, and evaluation (RDTE), are more remunerative than any other activity, a highly desirable contribution to social revenue in the amount of $3,000,000,000. While the problems, timetables, operations, and organizations of weapons and equipments may prove to be an economic waste which could be obviated by disconnection, investigation of their characteristics, principles of operation, behavior, power, potential usability, and so forth, is not. Any answer which advances the sum total of human knowledge and experience can contribute to the welfare of mankind, irrespective of its source, and in spite of the intent of the sponsor. Research and development funded by the Department of Defense is commendable also as enhancing the military power of the United States. At the same time, however, it remains to what extent are citizens in their capacity as patrons in the Science Age, cast "military" benefits to private sectors of the economy.[1] Thus, by the nature of the task, extensive expend in DOD are not what they may learn or develop, scientists were concerned by the implications of science for military purposes since invariably leads out into areas of great non-military significance. Bush and Conant commence an arts that plans of military accomplishment for research and development by fifteen

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[1]Harvey J. Brown and Oliver S. Ellsen, The Economics of Science in the Service Age (Cambridge: Harvard University Press, 1967), p. 61.

Perhaps the most important of these indirect gains, however, are the spillover benefits from military research and development. Some of these benefits are obvious. The development of a good transport plane for the military can lead directly to improved civil aviation. Some of the indirect benefits are less obvious. For instance, a Crane Company official has pointed out: "What were once government specials are now standard products, such as the chlorine valves we originally developed for chemical warfare." New ideas resulting from research are likely to have numerous and unforeseen applications. Military research and development led to such items as silicon transitors [transistors], improved anti-motion-sickness drugs, and new flame-proofing for fabrics. Special rockets may be useful as emergency brakes for trucks. Even the immense costs incurred in the development of the atomic bomb may eventually prove worthwhile on strictly nonmilitary grounds. Knowledge of space will no doubt provide nonmilitary gains that cannot at present be foreseen.

In fact, the spillover benefits from research and development by themselves may make it economical to increase this type of defense expenditure. . . .[2]

For budgetary purposes, the Research, Development, Test, and Evaluation appropriation is subdivided into eight general fields, plus an emergency fund:[3]

Military Sciences
Aircraft and Related Equipment
Missiles and Related Equipment
Military Astronautics and Related Equipment
Ships and Small Craft and Related Equipment
Ordnance, Combat Vehicles, and Related Equipment
Other Equipment
Programwide Management and Support

Curiously, that field of research and development subsumed under the title of Military Sciences is the least military of all. It is concerned with "basic research in the life, physical, and social sciences

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[2]Ibid., pp. 82-83.

[3]For Congressional consideration of RDT&E see House Appropriations Hearings, Part 5: "Research, Development, Test, and Evaluation"; and Senate Appropriations Hearings, pp. 951-1135.

Perhaps the most important of these indirect gains, however, are the spillover benefits from military research and development, some of which constitute new industries. The development of a good transport plane for the military can lead directly to improved civil aviation. Some of the indirect benefits are less obvious. For instance, a Cargo Company official has pointed out: "When were some government supplies are non-standard products, such as the clothing worn by military personnel for climatic reasons," that these requirements can certainly be [illegible] to have numerous underwater applications. Military research and development [illegible] to such items as clothing [illegible], improved anti-[illegible] drugs, and [illegible] for [illegible]. Spin-off products may be useful in military [illegible] for trucks. Even the learning curve involved in the development of the atomic bomb may [illegible] have marginally [illegible] or [illegible] military [illegible]. Knowledge of space will no doubt provide [illegible] gains that cannot be [illegible].

In fact, the military-industrial complex research and development [illegible] may have [illegible] to increase this type of [illegible] expenditure.

For [illegible], the [illegible], [illegible], and [illegible] transportation is subsidized [illegible] [illegible], plus [illegible] [illegible]:

Military Schools
Aircraft and Missile Equipment
Electric and Electronic Equipment
Military Aircraft and Missile Equipment
Guns and Small Arms and Ammunition
Armor, Combat Vehicles, and Tactical Equipment
Other Equipment
Programmatic Management and Support

Curiously, this list of research and development subsumed under the title of military schools is the lower military of all. It is concerned with "basic research in the life, physical, and social sciences

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[illegible], pp. 30-31.

For [illegible] consideration of [illegible] and Peace, Disarmament, Warfare, Peace in [illegible], Development, Trade, and Institutions, see [illegible] Alternative Futures, pp. [illegible].

to add to the store of fundamental scientific knowledge . . . ."[4] Included in the activities funded under Military Sciences are $191,000,000 for basic research, $81,000,000 for Medical research, and additional work in such diverse fields as atmospheric sciences, oceanography, astronomy, propellant chemistry, neurosensory phenomena, and a host of other activities, all conceivably applicable to military power, but just as significant for the eventual benefit of the civilian community. The Principal support of such organizations as the Naval Research Laboratory, the Air Force's Cambridge Research Laboratories and Rand Corporation, and the Army's Research Analysis Corporation and Human Resources Research Office is provided under this activity, in addition to work performed by universities, nonprofit organizations, and industry.

The Aircraft R&D category yields more immediate military power, and in the long run is also responsible for major advances in civil aviation, which private companies frankly admit they cannot afford without government contracts. For example, the Defense budget for fiscal year 1963 includes funds--sixty-eight million dollars--for the development of a supersonic jet transport aircraft, the C-141. The Air Force, in its testimony on the development of the C-141, emphasized its close cooperation with the Federal Aviation Agency, the airlines, and the aircraft industry toward eventual compatability of the C-141 with civil aviation.[5] Another project is attempting to develop a transport aircraft able to take off and land vertically, which could have inestimable value to

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[4]House Appropriations Hearings, Part 5, p. 4.

[5]House Appropriations Hearings, Part 4, p. 346-347.

[illegible] the years of [illegible] [illegible] [illegible]

civil aviation. Similarly, a Navy project to develop a new type engine for anti-submarine aircraft is directly applicable to civil aviation, as demonstrated by an exchange between Rear Admiral P. D. Stroop, Chief of the Bureau of Naval Weapons, and Representative R. L. F. Sikes of Florida, in testimony on engine procurement:

> Mr. SIKES. To what extent are these engines used for non-military purposes?
>
> Admiral STROOP. I think every engine we use in a Navy aircraft is also used in a commercial aircraft. I might say that the development in the engine business is supported as a joint effort by commercial users and the Government.
>
> . . . . . .
>
> Mr. SIKES. Is this program and a similar program for the Air Force really a development program for the entire aircraft industry of the Nation?
>
> Admiral STROOP. Yes, sir; not only for the service type aircraft, but also for the commercial aircraft.[6]

Even aircraft development and testing which is specifically military in nature, such as the current exploits of the X-15, yield general aeronautical knowledge and experience of value to the entire scientific and engineering community.

Expenditures for Missiles and Related Equipment, along with activities funded under Military Astronautics, have been largely responsible for the progress of the U.S. space program. Much of the expense and effort has been aimed specifically at accumulating military power. Simultaneously, however, the space program, with its requirements for miniaturization, rapid computation, and extreme accuracy, has spawned a

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[6] Ibid., p. 193.

civil aviation. Similarly, a body qualified to develop a new type engine for multiengine aircraft is thereby qualified in civil aviation, as manufacturer of an engine intended for military [illegible] or the [illegible] of civil [illegible].

Fifth, in training in engine maintenance.

Q. (Sen.) Do you think that [illegible] military [illegible] civilian industry?

Mr. (Sen.) I think very serious in the [illegible] in this area. In a commercial aircraft, it might be that the maintenance in the engine business is separated in a jet [illegible] or [illegible] the [illegible].

. . . . . .

Q. (Sen.) Is this program [illegible] a [illegible] program for the air force [illegible] a development program for the civilian [illegible] of the [illegible]?

Mr. (Sen.) Yes, any one [illegible] the [illegible] [illegible] civilian [illegible] for the commercial [illegible].

The Air Force contracts are having some [illegible] military [illegible], and in the [illegible] requests of the U.S. [illegible] [illegible] [illegible] of [illegible] in the civilian [illegible] [illegible] [illegible].

Facilities for training and [illegible] [illegible], along with [illegible] [illegible] military [illegible], have been largely provided for by the [illegible] of the U.S. [illegible]. Much of the [illegible] [illegible] [illegible] quantity of [illegible] military [illegible]. Nevertheless, the [illegible] [illegible] [illegible] for [illegible] [illegible], and [illegible], [illegible] [illegible]

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[1] [illegible]

whole new civilian industry producing computers, transistors, and other semi-conductor devices of inestimable non-military value. The same booster rockets designed to deliver warheads, and the same incredibly accurate (and expensive) systems designed to guide them, have lofted research and communications satellites, like the current TELSTAR vehicle, into orbit, as well as the astronauts. A whole new field of aerospace medicine has developed. In spite of the fact that Congressmen, among others, periodically insist on military applications of the space program, it seems evident that space exploration, like the nominally military national programs for Antarctica and oceanography, is no less a contribution to the advancement of human progress than the endeavors of Copernicus, Columbus, or the Wright brothers.

The Ships and Small Craft category of military R&D for fiscal year 1963 will fund, among other things, advanced development of a hydrofoil craft which may revolutionize not only a number of military missions, but civilian water transportation as well.[7] It will also provide for work in communications, sonar, and radar. A significant part of the research and development effort of the Naval Electronics Laboratory and David Taylor Model Basin is funded under this activity.

Even Ordnance, Combat Vehicles, and Related Equipment, despite its bellicose title, is a category yielding eventual value to the civilian community. In addition to work with explosives and small arms, this category provides for the development and testing of trucks, and

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[7] See "Hydrofoil Ship Faces Ocean Test," news item in The Washington Post, June 11, 1962.

where non-civilian industry produces new products, innovations, and spin-off technology devices of considerable marketability value. The same product carries readily to military markets, but the same increasingly economic (and economical) system designed to drive them, have taken research and commercialization activities, like the current TELSAT vehicle, into orbit, as well as the marketplace. A whole new field of aerospace medicine has developed. In spite of the fact that computerization, among others, primarily issues an military applications of the space program, it seems evident that space medicine, like the monetary military revenues provided for AERONAUTICS and aerospacepower, is in turn a contribution to the advancement of human endeavors that are involving at operations, Galileans, or the eighth continent.

The ships and small craft-shipyard or military yard for small pure-jets will find, among other things, numerous developments of a systematic nature which may revolutionize not only a number of military aircraft, but civilian water transportation as well.[1] It will also provide for work in communications, sound, and radar. A significant part of the research and development efforts of the Naval Electronics Laboratory and David Taylor Naval Basin is further about this activity.

Our problems, Cosmic Vehicles, and Nation Citizens, despite its military size, is a category yielding maximum value to the civilian community. In addition to work with engineers and small area, this cabinet provides for the development and training of groups, as

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[1] The Cincinnati Ship Yards Cosmo Clerk, more time in The Washington Post, June 14, 1964.

amphibious and automotive vehicles. One exotic vehicle claiming funds in fiscal year 1963 is the ground effect "air cushion" machine, which could conceivably prove as valuable to military power and as revolutionary to the civilian community as the automobile.

Other Equipments investigated and tested at the expense of the Department of Defense are many and varied: an infra-red device for seeing in the dark, various electronics systems, photographic equipments, communications machines and techniques, and obstacle crossing equipments are examples. Much of the support of the research and development effort of the Air Force's Lincoln Laboratories and the Army's Signal Research and Development Laboratory is provided under this activity.

Just as significant in its eventual value to the United States, though perhaps not quite so obvious, is the contribution that the Defense Department's RDT&E program makes to the scientific community of American colleges and universities. A significant proportion of Defense research is contracted out to various technical institutions, where the funds and projects provide sustenance and inspiration not only for established scientists, but for the young men who are their students. Hitch and McKean point out:

> The defense program gives a fillip to investment in education in still another way. The increased demand for scientists, engineers, electronics experts, and skilled technicians, stemming from both military operations and military research and development, is causing extra investment in scientific skills. In all likelihood, this investment will prove to be a profitable one from the standpoint of the whole economy (as well as that of the individuals). Even if the military's demand for these skills subsides, this scientific training and experience will be valuable to the nation.[8]

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[8]Hitch and McKean, op. cit., p. 82.

Disarmament would undoubtedly result in a shift of emphasis and revision of research projects now in the area which is the responsibility of the Department of Defense. In magnitude and general nature, however, the requirement for funds for Research, Development, Test, and Evaluation would, if anything, increase for the benefit of the scientific community, and in the long run, the general welfare of all mankind.

CHAPTER VI

SEPARATE APPROPRIATIONS

The main body of the Defense budget consists of the functional categories discussed in the preceding chapters: Military Personnel; Operation and Maintenance; Procurement; and Research, Development, Test and Evaluation; amounting to some forty-eight billion dollars in a single appropriations bill. In addition, the Department of Defense is responsible for three other significant activities for which funds must be provided: Military Construction, Military Assistance and certain Civil functions.

I. MILITARY CONSTRUCTION

The budgeting of funds for the construction of Department of Defense buildings and facilities is a separate procedure in the appropriations process. An individual authorization request,[1] and an individual appropriations bill have been submitted for fiscal year 1963, to provide $1,318,000,000 in Military Construction for projects ranging all the way from sewage disposal plants to missile silos, in locations all over the world. Hearings separate from those held before the House

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[1]See U. S. Congress, House, Committee on Armed Services, Military Construction Authorization, Fiscal Year, 1963, Hearings before the Committee, 87th Congress, 2d Session, pursuant to H. R. 10202 and H. R. 11131, March 5-April 9, 1962 (Washington: Government Printing Office, 1962). See also U. S. Congress, Senate, Committee on Armed Services, Military Construction Authorization, Fiscal Year 1963, Hearings before the Military Construction Subcommittee, 87th Congress, 2d Session, on S. 2841 (H. R. 11131), March 28-April 2, 1962 (Washington: Government Printing Office, 1962).

CHAPTER VI

SENATE APPROPRIATIONS

The main bulk of the defense budget consists of the individual authorizations for the procuring components: military personnel, operation and maintenance, procurement and research, development, test and evaluation; amounting to some forty-eight billion dollars in a single appropriations bill. In addition, the Department of Defense is responsible for three other significant authorities for which funds must be provided: military construction, military assistance and certain civil functions.

I. MILITARY CONSTRUCTION

The budgeting of funds for the construction of Department of Defense military and facilities is a separate procedure in the appropriations process. An individual authorization request,[1] and an individual appropriations bill have been submitted for fiscal year 1971, to provide $1,100,000,000 in Military Construction for projects ranging all the way from energy efficient plants to electric cities, in locations all over the world. Hearings separate from those held before the House

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[1] See U. S. Congress, House, Committee on Armed Services, Military Construction Authorization, Fiscal Year, 1971. Hearings before the Committee, 91st Congress, 2d Session, Pursuant to H. R. 10929 and H. R. 11111, March-April 7, 1970 [Washington: Government Printing Office, 1970]. See also U. S. Congress, Senate, Committee on Armed Services, Military Construction Authorization, Fiscal Year 1971. Hearings before the Military Construction Subcommittee, 91st Congress, 2d Session, on S. 2841 (H. R. 11111), March 30-April 6, 1970 [Washington: Government Printing Office, 1970].

Subcommittee on Department of Defense Appropriations have been held before a distinct Subcommittee on Military Construction of the Committee on Appropriations.[2] Construction is similarly divorced from other Defense appropriations in the Senate. As might be expected, considerable political interest in construction expenditures is evident within the Congress.

The greatest share of Construction funds is obligated by the Air Force--some $812,000,000--and the bulk of this is for ballistic missile facilities. Approximately two-thirds of all funds obligated to Military Construction contribute primarily to military power, in terms of missile sites, warship facilities, weapons support, and the like. It is not altogether accurate to consider such expenditures totally military, since land purchased for military construction is not lost to the economy, and could revert to civilian use in the event of disarmament. However, its use by the civilian sector is obviously restricted if it is occupied by a missile silo or target range, hence for purpose of analysis must be considered a military expenditure. Similarly, many of the buildings constructed for military purposes could be put to civil use in the event of disarmament, but only as a makeshift.

There are a number of items provided under Military Construction which are obviously of primary social value: such projects as hospitals

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[2]U. S. Congress, House, Committee on Appropriations, Military Construction Appropriations for 1963, Hearings before the Subcommittee on Military Construction, 87th Congress, 2d Session, printed in two volumes (Washington: Government Printing Office, 1962), (hereafter cited as Construction Hearings).

and schools. Other items funded serve a dual purpose, benefiting both the status of U. S. military power, and the social welfare of the local community; such projects as roads and airports, which are used by both civilians and the military. Perhaps the most clear-cut example of this dual role is the product of National Guard and Reserve construction: ". . . the Guard armory is often a town's most impressive edifice, and a social mecca of food sales, high school graduations, civic meetings and basketball games."[3]

In the detailed justifications of construction funds requested of Congress by the armed services, major individual building projects are separately identified, by function, price, and geographical location. Congress also requires that the separate portion of the total cost of each major project which is devoted to architecture, engineering, and design be isolated and identified. These total planning costs comprise a separate budget category. In addition, a catch-all allotment for each of the armed forces entitled "Minor Construction" is included

> . . . to provide for construction of new facilities, alteration of and additions to existing facilities, and conversion of existing facilities which are not specifically authorized by law or included in pending authorization legislation, which are determined to be urgently required, and which do not exceed $200,000 in cost for a single project.[4]

All three of these categories--major construction, design costs, and minor construction--have been analyzed in detail as presented to Congress

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[3]The Home-Town Troops," Time, Vol. LXXX, No. 2 (July 13, 1962), p. 13.

[4]Construction Hearings, Part 2: "Department of the Air Force; Defense Agencies; Loran Stations, Defense," p. 418.

for each of the armed forces, their Reserve and National Guard components, and for the department-wide Defense Agencies, to determine military and social value.[5] Contributions to social overhead funded under Military Construction have been isolated in the same major categories devised for the discussion of Military Personnel costs in Chapter II, consisting of the following:

MEDICAL CONSTRUCTION	TECHNICAL CONSTRUCTION
Hospitals	RDT&E Facilities
Clinics	Laboratories
Dispensaries	Navigation Facilities
WELFARE CONSTRUCTION	**CIVIC CONSTRUCTION**
Living Quarters	Utilities
Messhalls	Roads
Recreation Facilities	Municipal Airports
Chapels	Stores and Shops
Schools	Natl Guard and Reserves

It seems apparent that buildings and facilities serving the purposes listed in these four categories comprise construction which it would be necessary or desirable for the U. S. economy to provide in one form or another, disarmament notwithstanding. Proposed construction projects of these types for each of the armed forces and the Department of Defense agencies have been extracted from the hearings on Military Construction and listed in Appendix D. Table XVI is a summary of the data listed in Appendix D, indicating the sums to be obligated to Medical, Welfare, Civic, and Technical construction by each of the armed services, with

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[5]Since fiscal year 1963 needs for Minor Construction by definition cannot be foreseen at this time, it has been necessary for purposes of analysis to divide Minor Construction costs on the basis of data from previous years provided in the Congressional hearings.

for such as the Joint Library, the Air Force and National Guard Bureau, and for the Superintendent, Defense Industry is obtaining military and special funds.[1] Construction of joint occupied housing units and military construction have been delayed in the same manner. Delays resulting from the withdrawal of military personnel could be expected.

II. Conditions of the Colombia

NATIONAL CONSTRUCTION	CONTROL CONSTRUCTION
Hospitals	Office Facilities
Clinics	Warehousing
Dormitories	Activation Facilities
NON-NAT. CONSTRUCTION	**CIVIL CONSTRUCTION**
Library Services	Utilities
Recreation	Roads
Non-Service Facilities	Municipal Airports
Chapels	Sewer and Drain
Schools	Well Water and Sanitary

In some cases, the utilities and facilities serving the contract sites to have four separate contract construction which is work is basically a duplicate for the U.S. a method to provide in one fund or model, nationwide construction. Personnel construction projects of short types for each of the first period and the requirement of Saturn equipment some have contractor from the beginning on military construction and labor or equipment to. There not is a summary of the main items in Appendix by indicating the sum is in multiple to service, welfare, clinic, and national construction by each of the seven services, with

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[1] See Joint plan 1961 Memo for Plans Construction by Detail. Site control is changed at this time. It can not necessary the problem of security to civilian whose Construction model on the small at some Jrm operation plan involved to the Conservational Services.

a total cost to the Department of Defense for fiscal year 1963 of $435,355,000, approximately one-third of total Military Construction funds.

TABLE XVI

SUMMARY OF MILITARY CONSTRUCTION PROJECTS
REQUIRED BY SOCIAL OVERHEAD*
[in thousands of dollars]

Construction Category	ARMY	NAVY+	USAF	DOD Agencies	Category Total
Medical	$ 16,076	$ 14,278	$ 23,940		$ 54,294
Welfare	39,202	63,654	29,071	604	132,531
Civic	39,083	22,876	41,206	9,505	112,670
Technical	9,916	17,501	85,475	22,968	135,860
Service Total	$104,277	118,309	179,672	33,077	$435,355
Total Cost of Projects Required by Social Overhead					$435,355,000

*See Appendix D for lists of individual projects by service and source data; all figures are compiled from Construction Hearings.

+Includes Marine Corps Construction projects.

A brief look at the Department of Defense for Fiscal Year 1971 is presented, representing the figure of total military construction costs.

TABLE IVC

SUMMARY OF MILITARY CONSTRUCTION PROJECTS
BY DOLLAR OBLIGATIONS
(In thousands of $'s)

Construction Category	ARMY	NAVY*	USAF	DOD Complete	Category Total
Medical	[illegible]	[illegible]	[illegible]		[illegible]
Military	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Civil	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Training	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Service Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total Cost of Military Projects by Special Overseas					[illegible]

*The Summary of the Navy of 1,[illegible] projects by service and where only all figures are complete from Construction Engineer.

*Includes Marine Corps Construction projects.

II. MILITARY ASSISTANCE

Like Military Construction, the Military Assistance program is not included in the authorization and appropriation process for the bulk of Department of Defense obligations. Authorization for Military Assistance is obtained as a component of the total U. S. foreign aid program, and the appropriation request for New Obligational Authority totaling $1,500,000,000 is considered apart from the remainder of the Defense budget by the Congress.[6]

Most of the funds allotted by the United States to the military assistance of some sixty-nine other nations are consumed in the procurement of weapons and military equipments, and the training for their operations and maintenance. However, in view of the underdeveloped nature of many of the countries receiving U. S. military aid, Military Assistance also provides significant social services in the form of equipment and training for general administration; in the construction of roads, docks, bridges, and sanitation facilities; and in the installation and operation of communications equipment. While military aid

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[6]For discussion of the current authorization bill, see Richard L. Lyons, "$4.6 Billion Aid Bill Passed by Senate," The Washington Post, June 8, 1962. The timing of Congressional hearings on appropriations has been such that the record of hearings on Military Assistance for fiscal year 1963 was not released in time to provide the reference for this analysis. However, the unclassified version of the detailed data presented in justification of Military Assistance appropriations was printed in pamphlet form: U. S. Department of Defense, International Security Affairs, Division of Military Assistance, Office of the Comptroller, Military Assistance Facts, 1 March 1962. In addition, The Budget of the U. S. Government, 1963--Appendix includes considerable descriptive data on the Military Assistance portion of the DOD budget.

12. MILITARY ASSISTANCE

The military assistance, the military assistance program is not limited to the authorization and appropriation process for the sum of expenditures at certain obligations. Authorization for military assistance is obtained as a component of the total U. S. foreign aid program, and the appropriation request for the obligational authority totaling $1,270,000,000 is contained upon the presentation of the Defense budget to the Congress.[6]

Part of the funds allotted by the United States to the military assistance of the Philippine armed forces are expended in the procurement of weapons and military equipment, and the furnishing for such operations and maintenance. However, in view of the constitutional system of some of the countries receiving U. S. military aid, military assistance also provides significant social services in the form of employment and training for general administrating in the construction of roads, bridges, and medical facilities and in the technical-medical and operation of communications equipment. While military aid

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[6] The allocation of the foreign assistance bill, was changed to Lyndon B. Johnson aid bill passed by Congress. The Philippine part, June 15, 1964. The ending of congressional hearings on appropriations has been long and the process of hearings on military assistance for Illana year 1965 was not released in time to provide any reference for this material. However, the substantial version of the hearing was provided in justification of military assistance expenditures was printed in regular issue U. S. Department of Defense, International Security Affairs, Division of Military Assistance, Office of the Secretary, Military Assistance Facts, 1 March 1965. In addition, the budget of the U. S. Government, Fiscal-Economic Increase requirements obligations data on U. S. military assistance program at the 20% budget.

is obviously aimed primarily at providing reliable adjuncts to U. S. military power, this can only be accomplished in some areas by raising the entire level of national viability, and even in more advanced areas often requires an across-the-board improvement of expertise in certain basic fields such as public administration, sanitation, transportation, or communications. In those politically unstable nations in which the armed forces constitute the center of power and stability, training and experience in modern military operations, construction, and administration, while admittedly an imperfect alternative, is one of the few avenues available for the development of political sophistication.

Nature of Military Aid

Reservations account for more than half of the Military Assistance funds. Most of the military equipment and supplies which the United States provides to its foreign allies is obtained by placing orders with the U. S. military services. Military Assistance funds are reserved when the orders are placed, and the military services are paid when the items are delivered. Funds are obligated in the following categories:[7]

Reservations:	Other Obligations
1. Aircraft	9. Offshore Procurement
2. Ships	10. Supply Operations
3. Tanks, Vehicles, & Weapons	11. Training
4. Ammunition	12. Administration
5. Missiles	13. Headquarters & Agencies
6. Electronic Equipment	14. Foreign Construction
7. Military Public Works	15. Research & Development
8. Other	16. Other Activities

[7]Budget of the U. S. Government, 1963--Appendix, pp. 324-329.

In achieving these priority in providing military assistance to U. S. military groups, this can only be accomplished if some areas by raising the ability level of national capability, and even in more advanced areas allow supplies to assure-the-Soviet improvement of capacities in certain basic lines such as public administration, medicine, transportation, or communications. In these politically sensitive areas to which the small force contributes the basics of power and mobility, training and equipment in minor military operations, constructive, and civilian-action, while emphasizing on important strategies, is the or the one manner available for the development of political capabilities.

Nature of Military Aid

Description assumes the more than mere of our military assistance-more funds, just to the military equipment and supplies which the United States provides to the foreign allies is rendered by placing members with the U. S. military services. Military assistance funds are received when the units are needed, and the military services are paid from the funds are obligated. Funds are obligated in the following categories:[7]

Categories	Other Obligations
1. Aircraft	9. Military Personnel
2. Arms	10. Spare parts
3. Tanks, vehicles, & weapons	11. Training
4. Ammunition	12. Administration
5. Ships	13. Maintenance & repairs
6. Electronic equipment	14. Foreign Construction
7. Military Facil. Work	15. Research & development
8. Other	16. Other activities

[7] Lecture of the U. S. Government, 1961--Economics, pp. 300-311.

Funds obligated to the purchase of items in the first five categories are entirely military in nature, as indicated by the category titles. Other categories which are largely or entirely military in nature include: Off-shore procurement, the purchase of military supplies overseas to help allied countries establish a defense production base; Supply operations, the annual cost of packing, handling, storing, and transporting Military Assistance materiel; Contributions to International Military Headquarters and Agencies, the assessments levied against the United States in accordance with cost-sharing agreements for the administrative support of the military headquarters and agencies, including the Standing Group of the North Atlantic Treaty Organization, Southeast Asia Treaty Organization, and the Central Treaty Organization; Research and Development, limited in this case to work on weapons and weapons systems of common interest undertaken by allies in certain fields in which their facilities show promise of prompt success; and Other Activities, including U. S. support for expanding programs of coordinated weapons production in Europe and integrated NATO procurement of spare parts.

Contributions to social overhead appear in the remaining six categories, as indicated by descriptions in the Budget Appendix:

6. Electronic equipment.--The 1963 program continues the modernization of military communications systems in less-developed countries.

7. Military public works.--Materiel and equipment directly supplied by the United States for military assistance construction are procured through the military service supply systems. Other U. S. costs for this construction are met initially by the military assistance program and are cited in paragraph 14 below.

Basic activities in the process of issue on the first five objectives are military aviation in nature, is performed by the Naval Air Force. Other activities which are largely or totally military in nature include in-house air-to-ground processing, the number of military supplies available to help allied countries establish a nuclear production capability, the actual rate of loading, unloading, storing, and transporting military materiel, contributions to international military training and exercises, the extensive field support the United States provides to aerospace and air-defense systems for the administrative support of the military headquarters and agencies, in-house the leading group of the Naval Aviation Training and Operations, Naval Air Force Operations, and the Naval Training Operations Command and Training, Taking in this case to start to acquire an support system of common interest contribution to allies in certain fields in which their activities also provide at least success and other activities, including B, a support for operating programs of operational support provided to deploy and integrated with processing of space items.

Contributions to social overhead support in the maintaining the infrastructure, as defined by participation in the Navy's operations:

a. Operational systems.—The 1970 Program continues the modernization of military communications systems in naval-unique theaters.

b. Military pacific force.—Naval and Diplomatic Attaché supplied by the United States for military assistance countries are provided through the military service supply system. Other B, 1, media for this contribution has not initially by the military assistance program and are also by assistance to allies.

8. Other.--A variety of special purpose equipment, petroleum, medical, and other supplies, and repair and rehabilitation of used equipment not covered above are provided through orders placed with the U. S. Services.

. . . . . .

11. Training.--Increased training programs in free-world countries are required to insure effective use of the new weapons and equipment supplied through the military assistance program, teach basic skills to forces of less-developed nations, and create favorable attitudes toward the United States and its policies.

12. Administration.--The administrative expenses of the program incurred by U. S. Military assistance advisory groups, the unified commands overseas, and the departments are included.

. . . . . .

14. Contributions to construction of facilities in other countries.--Included are (a) construction of military and logistical facilities under the jointly financed NATO infrastructure program, and (b) contract costs, architect-engineering services and related overhead items for military assistance construction.[8]

One significant public works project is funded not under construction, but appears as part of the cost of supporting international headquarters and agencies; the Central Europe Operating Agency (CEOA) handles the integrated Central Europe Pipeline System.[9]

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[8] Budget of the U. S. Government, 1963--Appendix, pp. 325-326. Italics in the original.

[9] Military Assistance Facts, p. 34: "The Central Europe Pipeline System is an integrated system of pipelines in five countries--Germany, Belgium, Netherlands, France and Luxembourg. Canada, US and UK are users of the system in conjunction with the five host countries. The system is being constructed with NATO Infrastructure funds. The eight user countries are responsible financially and technically for its operation and maintenance, and the cost of necessary capital improvement. U. S. share under current cost is 39.0%." Detailed funding for FY 1963 is classified, but interpolation from FY 1962 indicates a cost of approximately $1,116,000.

8. Other.--A variety of special purpose equipment, petroleum, medical, and other supplies, and repair and rehabilitation of used equipment not covered above are provided through orders placed with the U. S. Services.

. . . . . .

11. Training.--Increased training programs in free-world countries are required to insure effective use of the new weapons and equipment supplied through the military assistance program, teach basic skills to forces of less-developed nations, and create favorable attitudes toward the United States and its policies.

12. Administration.--The administrative expenses of the program incurred by U. S. Military assistance advisory groups, the unified commands overseas, and the departments are included.

. . . . . .

14. Contributions to construction of facilities in other countries.--Included are (a) construction of military and logistical facilities under the jointly financed NATO infrastructure program, and (b) contract costs, architect-engineering services and related overhead items for military assistance construction.[8]

One significant public works project is funded not under construction, but appears as part of the cost of supporting international headquarters and agencies; the Central Europe Operating Agency (CEOA) handles the integrated Central Europe Pipeline System.[9]

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The social value of projects which can be readily provided by Military Assistance construction funds was recognized by Representative Flood of the House Appropriations Committee, and suggested to Secretary McNamara in the course of his testimony before the Department of Defense Appropriations Subcommittee:

> Mr. FLOOD. . . . I spent 5 weeks in Honduras, Guatemala, Nicaragua, and Costa Rica. I spent nearly all my time there with our military people. One crying need down there, which our people think they should have, and most of their best people think they should have, is the establishment . . . of so-called combat engineer units that can be utilized for public works programs--highway construction and similar things. This is a crying need and a vital need and a most desirable thing.
>
> I would take for granted, if it were true of the Central American countries, it would be equally, if not more so, true of certain others. I would hope that insofar as the military aid program is concerned, great attention be given to the development and increasing of this kind of operation. Its horizons are unlimited.

Although Secretary McNamara's response was rather noncommittal at the time (the exchange took place February 1, 1962), a subsequent news story indicates that the Department of Defense has embarked on a major public works assistance program in under-developed friendly countries, under the title of "Civic Action." The news release states that "a team of U. S. Army experts and a $1.5 million aid grant will help the Ecuador Army and 10,000 civilian volunteer workers build roads, schools, irrigation canals and other public works. . . ." It goes on to note: "The Pentagon . . . contends that in many countries the Army is the only organization capable of handling many local public works, communications,

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[10] House Appropriations Hearings, Part 2, p. 208.

The service mission of preschool schools can be vastly improved by utilizing instructional consultants from the profession to supplemental floor of the house instructional consultants, who supervise to instructing teachers in the course of its instruction during the instruction of pupils appropriately in reading.

Mr. Fulton . . . I point I which is Hampton, Nebraska, Hampton, the Lewis study. I come reading activity the that were our military people. The study and the Lewis, which our people with the school Bow, and most of their own people other that Lewis study, is the instructions . . . of educational assistant students will find can be utilized the public schools programs--library, instruction and similar duties. This is a trying that one a great deal and a most instructional value.

I would like two comments, if I may bring from of the Chairman assistant consultant, it would be reality, if not some one, have or similar schools. I would also that teacher of the utilizing of program in consultant, point attention or above is the instructional the instructing of this kind of question. The instructions the individual.

Although elementary kindergarten supervisor was rather noncommittal in the Iowa City conference here plans February 1, 1967, a questionnaire from state instructional that the superintendent of schools the consultant in a major public were visitation programs in kindergarten-primary classes specifically, about the kinds of activity desired." The more frequent answer that is some of the kindergarten supervisor has a full-time all years will help the teacher deep and social activities appropriate activity learn really schools, individual needs and other special needs. . . . It goes on to say, "the problem . . . problems that be some supervisor the deep is the only appropriate supply of teaching many local parents-school coordinations,

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[14]Iowa Instructional Bulletin, Vol. 4, p. 200.

transportation, and agriculture and school improvement projects"; and concludes: "Under the master plan, U. S. Army survey teams are sent in to determine what projects the host army could handle and then help them carry out the jobs."[11]

Military Assistance Summary

The philosophy of foreign aid can be argued at length, and is, annually, in Congressional debate. While much of the rationale is geared to national security, it seems just as important for the welfare of the United States to develop friendly markets and sources of supply for raw materials in politically stable nations abroad--to say nothing of the philanthropic responsibility, real or imagined, of the richest nation in the world. It seems quite likely that Military Assistance as such would be largely obviated by disarmament, but many of the assistance functions presently provided under the sponsorship of the Department of Defense would appear elsewhere in the economy.

Facets of the Military Assistance program of lasting social value are summarized by cost in Table XVII. Out of the total New Obligational Authority of $1,500,000,000 requested, just slightly more than a third is devoted to social overhead.

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[11] John G. Norris, "Pentagon 'Civic Action' Holds Military Hopes," The Washington Post, June 18, 1962. See also "U. S. Army Aid Plan to Start in Ecuador," news item in The Washington Post, June 12, 1962.

TABLE XVII

COST TO THE U. S. ECONOMY OF SOCIAL SERVICES BUDGETED AS MILITARY ASSISTANCE BY THE DEPARTMENT OF DEFENSE*

Title	Amount
Electronic Equipment	$ 97,976,000
Military Public Works	11,649,000
Other	118,006,000
Training	120,793,000
Administration	25,000,000
Construction	129,718,000
CEOA	1,116,000
TOTAL	$504,258,000

*Data from The Budget of the U. S. Government, 1963--Appendix, p. 324; Central Europe Operating Agency data from Military Assistance Facts, p. 34.

TABLE XVII

LIST OF THE 5-, 6-, 8-, AGENCY OF MEDICAL SERVICES
WORKING IN MILITARY INSTITUTES BY
THE DEPARTMENT OF DEFENSE

TITLE	AMOUNT
Laboratory Services	[illegible]
Military Health Units	[illegible]
Other	[illegible]
Training	[illegible]
Administration	[illegible]
Contingencies	[illegible]
Other	[illegible]
TOTAL	[illegible]

Source: [illegible] the Ministry of the [illegible], [illegible]
Ministry, [illegible]

III. CIVIL FUNCTIONS

Two major activities which formally bear the title of "Civil" are nevertheless responsibilities of the Department of Defense: one is the Civil Defense program, and the other is a group of six miscellaneous activities which are funded together under the budget title "Department of Defense--Civil."

Civil Defense

Included in the Department of Defense budget is an appropriation request for $695,000,000 to finance the program of civil defense which has lately become a Defense responsibility. The bulk of the funds is requested for incentives to non-profit institutions--schools, hospitals, and welfare institutions--to encourage and assist in the building of facilities which could serve as fallout protection in the event of a nuclear attack. The total program consists of the following:[12]

Shelter incentives	$460,000,000
Shelter in existing Federal buildings	35,000,000
Shelter survey, marking, and stockage	56,000,000
Research and Development	17,755,000
Warning and detection	46,160,000
Emergency operations	33,485,000
Financial assistance to states	32,000,000
Management	14,600,000

Public opinion concerning the need for fallout shelters has apparently subsided sufficiently for the Congress to ignore the portion of the Civil Defense request which seeks shelter incentives in the

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[12] Budget of the U. S. Government, 1963--Appendix, pp. 291-294. For Secretary McNamara's statement on Civil Defense, see House Appropriations Hearings, Part 2, pp. 135-149.

III. CIVIL VOCATIONS

The major activities which should be home the bulk of civilian and servicemen's responsibilities of the Department of Defense are in the civil science programs, and the other is a group of all institutions activities which are directly impacted under the broad title "Government of Defense—Civil."

Civil Academy

Included in our conversions of Defense budget is the reorganization program for $[illegible],000,000 to finance the program of civil service which has likely become a defense responsibility. The bulk of the funds is requested for transfers to non-profit institutions—schools, universities, and military institutions—to encourage and assist in the building of activities which could serve as talent potentials in the event of a nuclear attack. The total program consists of the following:[12]

Junior laboratory	$[illegible]
Centers in existing Federal buildings	[illegible]
Better survey, mapping, and research	[illegible]
Research for development	[illegible]
Mapping and detection	[illegible]
Emergency operations	[illegible]
Financial assistance to states	[illegible]
Management	[illegible]

Civil defense concerning the need for action analysis has [illegible] additionally for the Congress to expand the portion of the Civil Defense Program which seem similar functions in the

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[12] [illegible] Hon. [illegible], Secretary, [illegible], pp. [illegible]. For [illegible] assistance to civil defense, see [illegible] [illegible], Part 3, pp. [illegible].

amount of $460 million. The House Armed Services Committee has not even scheduled authorization hearings on that portion of the bill. When questioned at his press conference on July 5, 1962, concerning this lack of action on civil defense, the President insisted that the administration has not lost interest in the proposal; however, no further action on that portion of the appropriation request has been forthcoming.

Expenses for Civil Defense are almost entirely military in nature. Without the threat of nuclear war, there would be no such thing as Civil Defense, hence disarmament would obviate its cost. One minor aspect of the program of continuing social value, however, is the warning and detection system: "Funds are requested in 1963 to commence nationwide installation of this system, utilizing the existing network of commercial power lines. The system will provide a means for natural disaster warning as well as warning of enemy attack."[13]

Department of Defense--Civil

The civil functions of the Department of Defense are considered separately in the budget because of their unique nature, but account for more than a billion dollars in Defense funds: $1,065,862,000. They consist of the following:[14]

Cemeterial Expenses	$10,276,000
Corps of Engineers--Civil	1,021,965,000
United States Soldiers' Home	(trust fund)
Ryukyu Islands, Army	7,900,000
The Panama Canal	25,694,000
Wildlife Conservation, etc.	27,000

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[13] Budget of the U. S. Government, 1963--Appendix, p. 291.

[14] Budget of the U. S. Government, 1963, pp. 175-179.

amount of high activity. The Bonneville Power Administration has not even substantial authorization backlogs on that portion of the BPA, those operations or the power construction as-built is 100%, considering full and of action on civil matters, the President believes that the administration has not just failure in its proposed budget, or further action on that service if the appropriation request has been forthcoming.

Demands for civil defense are almost entirely military in nature. Without the threat of nuclear war, there would be no such thing as Civil Defense, hence discussions would consider the cost. The other aspect of the problem of continuing social values, however, is the operating and maintenance expense. These are concerned in CPI-14 concerning institutional considerations of both systems, emphasizing the building blocks of commercial power lines. The system will provide a model for national disaster warning as well as monitoring of energy systems.[1]

Expenditures in Non-Civil

The civil functions of the Department of Defense are concerned exclusively in the budget because of civil nuclear energy, has covered for many years a fiscal deficit in various income [illegible]. They consist of the following:[2]

Commercial Expenses	[illegible]
Sales of Equipment—Civil	[illegible]
Sales Power Marketing Agency	[illegible]
[illegible], etc.	[illegible]
The Power Agency	[illegible]
Civil-Air Transportation, etc.	[illegible]

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[1] Report of the U. S. Government, [illegible], p. [illegible].

[2] Report of the U. S. Government, [illegible], pp. 175-179.

The major single activity carried out under this appropriation is the program of construction and flood control carried out by the Army Corps of Engineers:

> The 1963 program provides for a continued high level of preconstruction planning activities and for construction now underway of 68 navigation projects, 7 beach erosion control projects, 96 flood control projects, 19 multiple-purpose projects, and 26 navigation rehabilitation projects.[15]

The entire appropriation for Department of Defense--Civil is an obligation to social overhead. Even though the activities are presently carried out by the Army, all are requirements which would continue unaffected by disarmament.

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[15] Ibid., p. 176. The Budget Appendix notes the individual costs of projects at more than 700 individual locations throughout the U.S., pp. 336-352.

CHAPTER VII

SUMMARY AND CONCLUSIONS

The budget of the Department of Defense for fiscal year 1963 has been analyzed in detail in an effort to determine its proper role in economic considerations of disarmament. Defense costs have been divided between the requirements of two arbitrarily defined and mutually exclusive categories: (1) military power, and (2) social overhead. Military power has been defined as all Department of Defense goods and services which would be obviated by total disarmament; social overhead consists of those goods and services presently provided by the Department of Defense which would continue to be required under conditions of total disarmament.

Table XVIII is a statistical summary of the costs of all military and social services to be performed by the Department of Defense in fiscal year 1963, by functional category within the budget. In general, the analysis indicates that the cost of military power consists largely of the price of goods, customarily referred to in the Defense Department parlance as "hardware": the ships, aircraft, tanks, guns, projectiles, missiles, and incredibly expensive weapons systems of modern warfare. Most of the military expenses appear under the category of Procurement, under Military Construction in the price of buildings and facilities, and in the cost of military supplies and equipments for Operation and Maintenance and Military Assistance.

CHAPTER III

ROLES OF DEPARTMENTS

The budget of the Department of Defence for fiscal year 1963 has been designed to result in an effort to rationalize the proper role in economic development of departments. Defence costs have been divided between the requirements of the maintenance military and economic activities: (1) military power, and (2) social services. Military power has been defined as all expenditure of defence funds and services which serve no primarily civil requirements; social services consists of those funds and services primarily provided by the Department of Defence which would normally be provided by other departments of civil government.

This civil is a substantial amount of the costs of all civil duty and social services is performed by the Department of Defence in fiscal year 1963, by functional category which the budget. In general, the analysis indicates that the use of military power consists largely of the roles of years, subsequently reflected in the Defence Department as "commerce": the ships, aircraft, boats, cars, warehouses, airfield, and basically expensive weapons system of modern warfare. Part of the military resources appear under the category of "commerce", under military functions in the form of buildings and facilities, and in the use of military supplies and equipment for operation and maintenance and military training.

On the other hand, the cost of social overhead consists largely of the price of services, which have been categorized for purposes of the analysis as Medical Services, Welfare Services, Civic Services, and Technical Services. These consist of such routine requirements as feeding, clothing, and housing military personnel; medical and dental care; and such civic requirements as law enforcement, firefighting, storekeeping, transportation, and utilities. Other personnel benefits include education and training, religious facilities, recreational facilities, and a host of miscellaneous welfare activities. In addition, significant services to the nation and to the world are provided in scientific endeavors. The bulk of social overhead expenses appears as compensation of Military Personnel, plus significant costs for technical services in Research and Development and for other services in Operation and Maintenance.

The subject of arms control and disarmament is exceedingly complex, both nationally and internationally. It is also extremely important for the welfare of mankind. Every aspect--social, political, and economic--of a problem of this importance and magnitude in the international milieu is worthy of the keenest scrutiny, but meaningful conclusions can only be drawn on the basis of accurate information. The problem of achieving disarmament is difficult enough without the added obfuscation of well-intended but misleading generalizations. Rather than the total figure of fifty-two billion dollars (or "ten percent of the gross national product") commonly cited, the actual cost to the Department of Defense of all the accouterments of U. S. military power

TABLE XVIII

COMPARABLE COSTS TO THE U. S. ECONOMY OF MILITARY POWER AND SOCIAL OVERHEAD PROVIDED BY THE DEPARTMENT OF DEFENSE

Functional Category	Total Budgeted	Social Overhead	Military Power
Military Personnel	$13,230,200,000	$10,255,578,000	$ 2,974,622,000
Operation & Maintenance	11,608,800,000	4,795,621,000	6,813,179,000
Procurement	16,445,000,000	2,175,268,000	14,269,732,000
Research & Development	6,843,000,000	6,843,000,000	
Military Construction	1,318,000,000	435,355,000	882,645,000
Military Assistance	1,500,000,000	504,258,000	995,742,000
Civil Defense	695,000,000	46,160,000	648,840,000
DOD--Civil	1,065,862,000	1,065,862,000	
Total DOD Budget	$52,705,862,000		
Total Budgeted for Social Overhead		$26,121,102,000	
Total Resultant Cost of Maintaining Military Power			$26,584,760,000

TABLE XVIII

COMPARISON DATA TO FIG 6. 5. SCHOOL OF MILITARY MAGIC
AIR TRANS. CARGOES MOVING AT THE
DISCRETION OF NATIONS

Functional Category	Total Budget	Total Overhead	Military Power
Military Pensions	811,000,000,000	210,152,370,000	4,471,000,000
Operation & Maintenance	11,000,000,000	4,370,000,000	6,610,170,000
Procurement	10,110,000,000	3,170,000,000	10,884,720,000
Research & Development	8,810,000,000	4,000,000,000	
Military Construction	1,010,000,000	410,120,000	590,000,000
Military Assistance	1,200,000,000	300,000,000	900,720,000
Civil Defense	900,000,000	10,100,000	890,000,000
Debt-Civil	1,000,000,000	1,000,000,000	
Total Of Budget	850,710,000,000		
Total Required For Social Overhead	230,000,000,000		
Total Discretion Left Of Maintaining Military Power	620,000,000,000		

can be computed at about twenty-eight billion dollars. At first consideration, this appears to be the sum which the U. S. economy would be able to salvage for application to more humane uses if disarmament should relieve the economy of the requirement for military preparedness. However, in considering the social services which the economy would have to continue to provide, a civilian cost factor indicating the increased cost of some goods and services on the civilian market must be applied, resulting in a difference of some two billion dollars with which the Department of Defense partially compensates for the cost of military power by savings in providing necessary social overhead for the economy. When the costs of social services with the civilian cost factor applied are totaled, the resulting sum is more than twenty-six billion dollars, close to half of the total Department of Defense budget for fiscal year 1963.

This, then, is the approximate figure with which to deal in considering the economic implications of disarmament with respect to the Department of Defense. Twenty-six billion dollars is a significant portion of the gross national product. Along with the problems of absorbing military personnel into the civilian work force without undue dislocation, the effects of disarmament on U. S. industry and the economies of other nations, and the problems of shifting all or part of defense expenditures to the private sector of the economy, absorbing the cost of military power represents a significant problem in considering the possible roads to disarmament and permanent peace. In devising workable schemes, however, the sum to consider with respect to the Department of Defense is not the total budget, but for fiscal year 1963, approximately half: $26,564,760,000.

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Part 3: "Operation and Maintenance." 700 pp.

Part 4: "Procurement." 860 pp.

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APPENDIXES

APPENDIX A

AIRMAN CLASSIFICATION STRUCTURE, U.S. AIR FORCE

OFFICER CLASSIFICATION STRUCTURE, U.S. AIR FORCE

ARMED FORCES PERSONNEL CLASSIFIED IN OCCUPATIONAL SPECIALTIES REQUIRED BY SOCIAL OVERHEAD

Services		ARMY[1]	NAVY[2]	USMC[3]	USAF[4]
Medical	- Officers	15,506	9,041		10,636
	Enlisted	46,753	29,006		24,508
Welfare	- Officers	3,093	1,800	399	5,896
	Enlisted	165,645	90,136	18,256	82,661
Civic	- Officers	33,353	8,958	3,165	13,060
	Enlisted	177,543	23,900	40,176	169,965
Technical	- Officers		2,621	64	8,014
	Enlisted	1,930	4,259	1,165	5,163
Miscellaneous	- Enlisted	63,187	93,154	22,265	12,831
Social Overhead Totals		51,952	22,420	3,628	37,606
		455,058	240,455	81,862	295,128
Total in Armed Services		116,650	74,059	16,255	120,037
		969,367	592,301	177,611	725,947
Percentage:	Officers	44.2%	30.6%	22.3%	31.3%
	Enlisted	44.2%	40.5%	46.1%	40.7%

[1]Data from U.S. Department of the Army, Office of the Deputy Chief of Staff for Personnel, Strength of the Army (U), DCSPER-46 (Washington, 31 March 1962), pp. 17-18. (Document is classified; data extracted is unclassified.) For detailed analysis of Army classifications, see Tab 1.

[2]Data from U.S. Department of the Navy, Chief of Naval Personnel, Navy and Marine Corps Military Personnel Statistics, NAVPERS 15658 (Washington 31 March 1962), passim. (Document is classified; data extracted is unclassified.) Also from House Appropriations Hearings, Part 1, p. 136. For detailed analysis of Navy classifications, see Tab 2.

[3]Data from U.S. Department of the Naty, Headquarters U.S. Marine Corps, Officers on Active Duty by MOS, Report No. 1060, Tab A; and from Enlisted Personnel on Active Duty by MOS, Report No. 1164, Tab A (Washington, 30 April 1962). For detailed analysis of Marine Corps, see Tab 3.

[4]Data supplied by Statistics & Reports Division of the Office of the Director of Data Systems & Statistics of the Office of the Comptroller of the Air Force, from classified documents. Statistics extracted are unclassified. For detailed analysis of Air Force classifications, see Tab. 4.

ARMED FORCES PERSONNEL CLASSIFIED BY OCCUPATIONAL SPECIALTIES
BETWEEN ON ACTIVE DUTY AND

Service		Army[1]	Navy[2]	Corps[3]	Grand[4]
Medical	- officers	15,344	9,081		10,434
	enlisted	40,722	29,306		34,408
Military	- officers	3,205	1,400	372	2,394
	enlisted	140,322	70,130	16,352	62,164
Civil	- officers	11,101	8,924	2,185	13,080
	enlisted	177,343	40,820	40,173	169,365
Technical	- officers		1,021	64	2,010
	enlisted	1,121	6,329	1,105	3,163
Miscellaneous	- officers	62,117	23,158	22,855	12,273
Social Services Totals		51,492	22,420	3,240	31,600
		451,22	240,125	31,862	270,128
Total in Armed Services		114,[illegible]	70,022	14,255	180,127
		390,[illegible]	348,301	177,011	720,847
Percentage: officers		24.29	4.63	22.10	11.39
	enlisted	12.39	14.39	16.14	42.74

[1]Data from U.S. Department of the Army, Office of the Deputy Chief of Staff for Personnel, Strength of the Army (U), DCSPER-AS (Washington, 31 March 1962), pp. 17-18. (Document is classified; data extracted is unclassified.) For detailed analysis of Army classification, see Tab 1.

[2]Data from U.S. Department of the Navy, Chief of Naval Personnel, Navy and Marine Corps Military Personnel Statistics, March 1962 (Washington: 31 March 1962), passim. (Document is classified; data extracted is unclassified.) Also from Navy Aeronautics Service, Part 1, p. 124. For detailed analysis of Navy classifications, see Tab 2.

[3]Data from U.S. Department of the Navy, Headquarters U.S. Marine Corps, Officers on Active Duty by MOS, Report No. 1000, Tab A; Enlisted Personnel on Active Duty by MOS, Report No. 1404, Tab A (Washington, 31 March 1962). For detailed analysis of Marine Corps, see Tab 3.

[4]Data supplied by Statistics & Reports Division at the Office of the Director of Data Systems & Statistics of the Office of the Comptroller of the Air Force, from classified documents. Statistics extracted are unclassified. For detailed analysis of Air Force classifications, see Tab. 4.

APPENDIX B, TAB 1

ARMY OCCUPATIONAL SPECIALTIES REQUIRED BY SOCIAL OVERHEAD

Officers		Number	Category*
Chaplains		1,371	W
Professors, U. S. Military Academy		365	W
Corps of Engineer		8,500	C
Military Police		1,935	C
Provost Marshal General		465	C
Finance Corps		1,335	W
Judge Advocate General Corps		1,219	C
Medical Corps:			
Dental		2,148	M
Medical		4,610	M
Medical Service		4,326	M
Veterinarians		452	M
Army Nurse Corps		3,519	M
Medical Specialist Corps		451	M
Quartermaster Corps		5,630	C
Signal Corps		8,676	C
Transportation Corps		6,908	C
	TOTAL	51,952	

Enlisted Specialties		Number	Category*
Medical Equipment Repairmen		670	M
Television Equipment Repairmen		840	C
Wire Maintenance		14,567	
Lineman	Cable Splicer		
Telephone Repairman	Antennaman		
Manual Office Repairman	Dial Office Repairman		
Electrical Equipment Maintenance		5,561	C
Prosthetic Appliances		1,167	M
Orthopedic Specialist	Dental Lab Specialist		
Optical Lab Specialist			
Quartermaster Equipment Maintanance		3,921	C
Civil Engineering Assistant		149	C
Construction		8,950	C
Helper	Carpenter		
Structures Specialist	Mason		
Pipeline Specialist	Terrain Analyst		
Utilities		5,196	C
Plumber	Heat & Ventiliation Spec.		
Utilities Foreman	Refrigeration Specialist		
Water Supply Spec.	Firefighter		

Auxiliary Services		4,605	C
RR Section Foreman	Tire Repairman		
Sawyer	Laundry Specialist		
Memorial Activities Spec.			
Automotive Maintenance (interpolated)		37,200	C
Supply Handling		15,237	C
Marine Operations and Maintenance		3,040	C
Hull Repairman	Boatswain		
Marine Engineer	Diver		
Engineer Construction Equipment Operation & Maint		21,423	C
Equipment Repairman	Asphalt & Concrete Equp.Op.		
Construction Machine Op.	Crane-Shovel Operator		
Quarryman	Equipment Assistant		
Railway Maintenance		274	C
Railway Operations		300	C
Miscellaneous Clerical		2,523	W
Information Specialist	Broadcast Specialist		
Attache Specialist	Math-Statistics Spec.		
Administration		78,337	W
Clerk	Clerk-Typist		
Stenographer	Legal Clerk		
Court Reporter	Postal Clerk		
Medical Records Clerk	Personnel Specialist		
Admin Specialist	Chaplain's Assistant		
Finance		5,603	W
Finance Clerk	Audit Specialist		
Disbursing Specialist	Accounting Specialist		
General Supply		48,180	C
Clerk	Chemical Specialist		
Engineer Specialist	Ordnance Specialist		
Quartermaster Spec.	Signal Specialist		
Transportation Spec.	Medical Specialist		
Parts Supply		2,303	C
Drafting and Cartography		2,086	C
Surveying		1,203	C
Printing		1,352	W
Pictorial		3,243	W
Photographer	Audio Specialist		
Photo Lab Specialist	TV Cameraman		
General Technical (interpolated)		1,930	T
Petroleum Lab Spec.	Chemical Lab Spec.		
Meteorological Observer	Physical Sciences Asst.		
Medical Care and Treatment		38,201	W
Physical Medicine		369	W
Medical Laboratory		6,130	W
Food Service		40,478	W
Helper	Cook		
Meat Cutter	Bread Baker		
Military Police		25,680	C
Bandsman		3,389	W

Special Services		5,049	W
Recreation Specialist	Personnel Psychology Spec.		
Animal Care		216	M
Dog Trainer	Veterinary Specialist		
Duty and Reporting Codes (interpolated)		54,310	Misc
College Trainee	Processing NCO		
Trainee	WAC Trainee		
Undetermined and Process of Separation		8,877	Misc
	TOTAL	455,058	

*M: Medical services; W: Welfare; C: Civic; T: Technical; misc: Miscellaneous.

APPENDIX B, TAB 2

NAVY OCCUPATIONAL SPECIALTIES REQUIRED BY SOCIAL OVERHEAD

Officers	Number	Category
Medical Corps	3,522	M
Dental Corps	1,752	M
Medical Service Corps	1,207	M
Nurse Corps	2,099	M
Nurse Corps Candidates	115	M
Medical Officers in Training	185	M
Supply Corps	5,125	C
Chaplain Corps	919	W
Civil Engineer Corps	1,577	C
Engineering Duty Officers	1,678	T
Special Duty Officers		
Communications	319	C
Law	466	C
Photography	10	T
Public Information	75	W
Hydrographer	11	T
Limited Duty Officers		
Administration	350	C
Bandmasters	3	W
Engineering	700	T
Photography	66	T
Aerology	57	T
Supply Corps	491	C
Civil Engineer	99	C
Warrant Officers		
Ships Clerks	178	C
Bandmasters	15	W
Supply Corps	282	C
Civil Engineer Corps	71	C
Medical Service Corps	161	M
Aerology	20	T
Photography	20	T
Research and Development	59	T
Professors		
MIT	2	W
USNA	360	W
NROTC	314	W
P.G. School, Monterrey	112	W
TOTAL	22,420	

APPENDIX A, TABLE 2

NAVY DOCUMENTATION PROCESSING SUBJECTS BY FISCAL CATEGORY

Category	Number	Percent
Medical Corps	1,322	8
Dental Corps	1,276	8
Medical Service Corps	1,208	8
Nurse Corps	2,000	8
Nurse Corps Candidates	115	7
Medical Officers in training	50	8
Supply Corps	1,186	5
Chaplain Corps	212	8
Civil Engineer Corps	1,277	5
Engineering Duty officers	1,070	7
Special Duty officers		
Communications	720	5
Law	528	5
Photography	13	7
Public Information	15	8
Oceanography	13	7
Lateral Duty officers		
Administration	120	5
Secretaries	1	8
Engineering	326	7
Photography	48	7
Aviation	57	7
Supply Corps	121	5
Civil Engineer	98	5
Warrant officers		
Supply Clerks	178	5
Secretaries	1	8
Supply Corps	325	5
Civil Engineer Corps	17	5
Medical Service Corps	181	8
Aviation	8	7
Photography	20	7
Research and Development	24	7
Probation		
CIT	1	8
JOBS	320	8
NROTC	316	8
P.G. Schools, Nonresidency	112	8
TOTAL	12,320	

Enlisted Specialists		Number	Category
Hospital Corpsmen, Rated		14,212	M
Hospitalmen		11,561	M
Dental Technicians, Rated		1,962	M
Dentalmen		1,271	M
Instrumentman		405	T
Opticalman		382	T
Stewards, Rated		6,687	W
Tablemen		7,992	W
Administrative and Clerical		54,009	W
Telemen	Storekeepers		
Yeomen	Disbursing Clerks		
Personnelmen	Commissarymen		
Machine Acct	Ships Servicemen		
Journalists	Postal Clerks		
Lithographer		470	T
Draftsmen		622	T
Musicians		1,705	W
Construction (CEC), Rated		6,641	C
	Strikers	1,143	C
Constructionmen		2,786	C
Utilities	Construction Electrician		
Steelworker	Construction Mechanic		
Builder	Equipment Operator		
Aerographer		2,380	T
Aviation Storekeepers		3,762	C
Photographers		2,662	C
Messmen (interpolated)		19,743	W
Masters-at-Arms (interpolated)		6,906	C
Patients and Prisoners (interpolated)		8,885	Misc
Seamen*	124,397		
Firemen*	38,578		
Airmen*	45,097		
	208,072 x 40.5%	84,269	Misc
	TOTAL	240,455	

*Most of the Navy's apprentices and trainees are not specifically designated as "strikers" in the field in which they work, but bear instead the general title "seaman," "fireman," or "airman," depending upon which branch of the navy they are assigned. In order to determine a reasonable approximation of the number involved in social overhead, the total number has been multiplied by the percentage of rated men involved in social overhead. This accounts for the comparatively large number of naval enlisted personnel listed as "Miscellaneous" and the smaller numbers for specific occupational specialties.

Salient Qualities	Number	Category
Hospital Corpsman, Male	1,112	a
Hospitalman	11,091	b
Dental Technician, Enlist	1,878	a
Dentists	1,415	a
Interpreters	130	f
Optician	20	f
Pharmacy, Male	6,107	b
Pharmacist	7,272	a
Rehabilitation and Clinical	14,500	a
Trainee	Professional	
Trainee	Nursing Corps	
Practical Nurse	Commissioned	
Medical Aide	Male Officers	
Journalists	Chief Clerks	
Lithographer	174	f
Orderlies	220	f
Radiologs	1,700	a
Computerlin (CCC), Male	2,000	c
Stylist	1,111	f
Computistics	2,100	c
Medicine	Construction Electrician	
Electrical	Construction Machinist	
Sailor	Enlisted Leader	
Area Engin	2,300	f
Aviation Ordnance	1,756	b
Photographer	2,060	f
Navigation (Quartermaster)	17,711	a
Aviation Electrician (Interpretation)	5,278	b
Machinist and Aviation (Interpretation)	1,000	Fleet
Gunner*	10,217	
Fireman*	8,378	
Airman*	15,017	
	20,212 a 10.12	
	45,109	Other
Total	300,227	

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*Part of the Navy's accomplishment has involved the unsuitability assignment of "airmen" in the field to which they were, but have to show the overall skill "Gunner," "Fireman," or "Airman," depending upon which branch of the Navy they are assigned. In order to determine a reasonable approximation of the number involved in actual numbers, the total number has been multiplied by the percentage of rated men involved in prior years. This accounts for the comparatively large number of naval aviation-related items as "misclassified" and the lower number for specific occupational qualifications.

MARINE CORPS OCCUPATIONAL SPECIALTIES REQUIRED BY SOCIAL OVERHEAD

Officers	Number	Category
Personnel and Administration	573	C
Engineer and Shore Party	592	C
Mapping Officer	7	T
Printing and Reproduction	9	T
Telephone Maintenance	14	C
Supply Administration and Operations	1,124	C
Transportation	35	C
Supply Services	25	C
Food Services	59	W
Disbursing	204	W
Motor Transport	140	C
Data Processing	35	T
Marine Corps Exchange	50	C
Informational Services	25	W
Photography	12	C
Training and Training Aids	5	W
Band	16	W
Corrections	11	C
Aerology	13	T
Education	90	W
Provost Marshal	289	C
TOTAL	3,628	

Enlisted Specialists	Number	Category
Personnel and Administration	10,606	W
Utilities	1,888	C
Construction, Equipment, and Shore Party	8,296	C
Drafting and Surveying	539	C
Lithography	299	T
Telephone Maintenance	666	C
Supply Administration and Operations	11,490	C
Transportation	788	C
Supply Services	641	C
Food Services	4,368	W
Disbursing	1,071	W
Motor Transport	12,907	C
Steward	894	W
Data Processing	866	T
Marine Corps Exchange	785	C
Photography	620	C
Band	1,297	W
Security Forces	1,566	C
Patients and Prisoners	760	Misc
Students	9,225	Misc
Overhead	12,280	Misc
TOTAL	81,862	

[illegible] CONSTRUCTIONS SPECIALITIES MEMBERS BY STATE OF [illegible]

Activity	Number	Percent
Personnel and Administration	271	0
Engineer and Inst. Serv.	260	0
Mapping Office	7	[illegible]
Printing and Reproduction	4	[illegible]
Telephone Maintenance	1	[illegible]
Depot Maintenance and Operations	1,[illegible]	0
Transportation	35	0
Supply Service	25	0
Fuel Service	37	[illegible]
Dispensing	304	[illegible]
Motor Transport	1[illegible]	[illegible]
Data Processing	15	[illegible]
Marine Corps Laboratory	20	[illegible]
Information Service	28	[illegible]
Photography	12	[illegible]
Training and Training Aids	0	[illegible]
Band	10	[illegible]
Chaplains	31	0
Aviation	13	[illegible]
Commission	20	[illegible]
Fleet Service	209	[illegible]
TOTAL	[illegible]	

Military Specialists	Number	Percent
Personnel and Administration	10,[illegible]	[illegible]
Utilities	1,080	[illegible]
Construction, Equipment, and Guard Serv.	6,[illegible]	[illegible]
Drafting and Surveying	338	[illegible]
Lithography	291	[illegible]
Telephone Maintenance	560	[illegible]
Depot Maintenance and Operations	14,[illegible]	[illegible]
Transportation	272	[illegible]
Supply Service	0[illegible]	[illegible]
Fuel Service	1,[illegible]	[illegible]
Dispensing	1,[illegible]	[illegible]
Motor Transport	14,[illegible]	[illegible]
Laundry	[illegible]	[illegible]
Data Processing	[illegible]	[illegible]
Marine Corps Laboratory	172	[illegible]
Photography	[illegible]	[illegible]
Band	1,[illegible]	[illegible]
Security Forces	1,[illegible]	[illegible]
Training and Training	[illegible]	[illegible]
Chaplain	2,[illegible]	[illegible]
Overhead	14,[illegible]	[illegible]
TOTAL	[illegible]	

APPENDIX B, TAB 4

AIR FORCE OCCUPATIONAL SPECIALTIES REQUIRED BY SOCIAL OVERHEAD

Officers		Number	Category
Weather		2,103	T
Research		814	T
Nuclear	Chemistry		
Mathematics	Metallurgy		
Physics			
Research and Development Management		2,056	T
Aeronautical Engineering		2,508	T
Motor Vehicle Maintenance		252	C
Civil Engineering		2,260	C
Cartography		4	T
Medical		10,636	M
Medical	Nurse		
Dental	Specialist		
Veterinary			
Chaplain		1,118	W
Legal		1,344	C
Police		2,041	C
Education and Training		2,489	W
Research sychology		529	T
Information		661	W
Financial		1,628	W
Supply		5,562	C
Logistics		436	C
Transportation		1,165	C
	TOTAL	37,606	

Enlisted Specialists	Number	Category
Weather Observer	5,163	T
Motor Vehicle Maintenance	10,687	C
Construction	12,128	C
Utilities	6,811	C
Fire Protection	11,257	C
Marine Helper	288	C
Transportation	24,912	C
Food Service	18,901	W
Supply	63,051	C
Accounting and Finance	7,201	W

APPENDIX A, PART 2

AIR FORCE CONTRACTORS PROFITABILITY BASED ON SALES (CONTD)

CATEGORY	SALES	CATEGORY
Aviation-	$3,100	7
Business	416	7
Boeing	Commercial	
Lockheed	Commercial	
Cessna		
Grumman Aerospace Corporation	2,000	
Bell Helicopter Textron	2,700	
Sikorsky Aircraft Corporation	500	
Civil Engineering	7,500	
Construction	1	
Medical	10,400	
Medical	Data	
Dental	Supplies	
Veterinary		
Chemical	1,100	
Metal	1,300	
Paper	2,000	
Education and Training	2,000	
Research - Economic	320	
Insurance	800	
Financial	1,000	
Supply	2,000	
Logistics	500	
Transportation	1,000	
TOTAL	17,000	

CATEGORY	SALES	CATEGORY
Leather Converter	2,400	7
Motor Vehicle Maintenance	10,000	
Construction	11,100	
Utilities	2,000	
Fish Processing	11,000	
Petrol Sales	500	
Transportation	2,000	
Food Service	12,000	
Supply	60,000	
Accounting and Finance	1,000	

Administrative		45,466	W
Chaplain	Postal		
Stenographic	Legal		
Printing		1,537	W
Information		1,656	W
Special Services		2,816	W
Physical Conditioning	Recreation		
Education and Training		3,571	W
Band		1,711	W
Police		40,831	C
Medical		21,291	W
Dental		3,214	A
Trainee		6,519	Misc
Patients and Prisoners (interpolated)		6,312	Misc
	TOTAL	295,128	

OPERATION AND MAINTENANCE COSTS FOR DOD DEPARTMENT-WIDE ACTIVITIES REQUIRED BY SOCIAL OVERHEAD

Activity	Amount	Page*	Category+
Petroleum and Oil Shale Reserves	$ 3,000,000	320	C
Proposed Per Diem Legislation	40,000,000	275#	W
Overseas Dependent Schooling	49,561,000	914	W
Information & Education Service	8,874,000	704	W
Court of Military Appeals	455,000	891	C
Claims	19,000,000	900	C
Contingencies	15,000,000	904	C
Office of Asst SecDef (Manpower)	1,173,000	615	W
Office of Director of Defense R & E	8,435,000	611	T
Defense Supply Agency	177,700,000	743	W
Non-profit Contracts, DASA	6,115,000	732	W
Support Activities	1,774,000	617	W
IntraDepartmental Activities:			
Women in the Services Education	51,000	622	W
Special Activities Program	175,000	623	W
Electronics Resources Program	341,000	623	C
Coordination of Antarctic Program	116,000	624	T
Management Information Studies	250,000	625	C
InterDepartmental Activities			
Committee on Equal Employment	175,000	694	W
Council on Youth Fitness	120,000	694	W
Federal Radiation Council	8,000	694	T
Committee on Nutrition	90,000	694	W
Assistance to Distressed Areas	85,000	695	W
Reserves for New Projects	114,000	696	C
Natl Bd for Promotion of Rifle Practice	500,000	128	W
Employees' Compensation Fund	996,300	656	W
National Oceanographic Program	57,100,000	335	T

*House Appropriations Hearings, Part 3.

#House Appropriations Hearings, Part 2.

+W: Welfare; C: Civic; T: Technical.

APPENDIX C

OPERATING AND MAINTENANCE COSTS FOR THE DEPARTMENT-WIDE ACTIVITIES FUNDED BY SOCIAL OVERHEAD

Activity	Budget	Prog.*	Obj.Cod.**
Revolving and Oil Seals Reserves	[illegible]	150	2
Proposed Fish Plan Implementation	[illegible]	217	4
Overseas Operations Schooling	[illegible]	210	4
Publication & Information Service	[illegible]	700	[illegible]
Court of Military Appeals	[illegible]	091	2
Cities	[illegible]	600	2
Contingencies	[illegible]	901	2
Office of Area Vendor (Manpower)	[illegible]	615	4
Office of Director of Defense R & E	[illegible]	011	7
Defense Supply Agency	[illegible]	723	[illegible]
Non-profit Contracts, DSA	[illegible]	722	4
Support Activities:	[illegible]	417	4
Intrapersonnel Activities:			
Women in the Services Education	[illegible]	622	4
Social Activities Program	[illegible]	620	4
Electronic Resources Program	[illegible]	623	2
Coordination of Education Program	[illegible]	625	7
Management Information Center	[illegible]	625	[illegible]
Interpersonnel Activities			
Counsel on Drug Programs	[illegible]	604	4
Council on Youth Fitness	[illegible]	620	4
Federal Radiation Council	[illegible]	605	7
Committee on Nutrition	[illegible]	604	4
Assistance to Disadvantaged Areas	[illegible]	605	4
Research for New Products	[illegible]	606	[illegible]
Unit for Prevention of Illegal Practice	[illegible]	120	4
Employees' Compensation Fund	[illegible]	050	4
National Geographic Program	[illegible]	605	7

*Gross Appropriations Ceiling, Part 1.

**Obj. Appropriations Ceiling, Part 2.

Key: Budget; G: Civil; M: Technical.

APPENDIX D

MILITARY CONSTRUCTION PROJECTS REQUIRED BY SOCIAL OVERHEAD

NAVY (INCLUDING MARINE CORPS)

Page*	Project	Cost (in Thousands) Design -	Project	Category+
35	Bachelor Officers' Quarters (BOQ), NSY Boston	$ 3.2	$ 80	W
	Water Facilities, NSY Bremerton	2.0	140	C
	Personnel Bldg, NavFac Nantucket	25.4	570	W
	Utilities	8.8	197	C
	Cold Storage, Sub Base, New London	21.3	469	W
	Barracks	64.0	1,605	W
	BOQ and Mess	22.0	544	W
	Utilities, NSY Norfolk	107.6	1,852	C
36	BOQ with Mess, Portsmouth NSY	21.0	526	W
	Radiological Lab; Neutron Radiation Facility	185.7	2,534	T
48	Extension of Spoil Area, Charleston NSY	18.5	425	C
92	Admin Bldg & Barracks, NavSta Charleston	13.5	400	W
	Barracks	9.4	469	W
	BOQ with Mess	74.8	907	W
	Chief Petty Officer (CPO) Mess	11.2	200	W
	Utilities	12.0	307	C
101	Messhall, NavSta Key West	32.5	563	W
104	Messhall, NavSta Mayport	13.6	188	W
	Barracks	29.7	577	W
113	Technical Training Bldg, NAS Memphis	114.0	1,975	W
115	Chapel, NAAS Meriden, Miss.	16.0	274	W
123	BOQ, NavSta Adak	37.8	1,639	W
	Bachelor Civilian Quarters	17.3	360	W

APPENDIX C

MILITARY CONSTRUCTION PROJECTS REQUESTED BY SOCIAL ORGANIZATIONS

Page[a]	Project	Cost (in thousands) Limit of Project	Cost (in thousands) Cost-sharing[b]	Code-sharing[c]
	NAVY (INCLUDING MARINE CORPS)			
97	Bachelor Officers' Quarters (BOQ), NTC Lakehurst	2,[illegible]	90	B
	Water Facilities, VIP Stewardson	2,0	140	C
	Fire Crash Boat, Naval Air Station Quonset Point	25,0	275	B
	Utilities	5,0	197	C
	Club Complex, Sub Base, San Diego	11,7	149	B
	Controls	66,0	1,005	B
	Bus and Lane	21,0	344	B
	Utilities, NTC San Diego	107,8	1,352	C
99	Bachelor Quarters, Portsmouth NSY	21,0	334	B
	Instructional Bldg, Western Facilities Facility	16,7	2,[illegible]	I
101	Expansion of Small Arms, Charleston NSY	16,5	145	C
103	Bachelor BOQ & Commons, Naval Ordnance Station Indian Head	13,5	160	B
	Commons	3,0	159	B
	Bay Utilities	72,8	277	B
	Naval Flying Officer (NFO) Base	11,8	340	B
	Utilities	42,0	277	C
105	Commissary, Service Bay Area	36,5	340	B
109	Commissary, Service Supports Services	11,0	160	B
		24,2	377	B
111	Technical Training Bldg, Sea Cadets	141,0	1,275	B
115	Chemical Tank Service, Elec.	16,0	274	B
117	BOQ, Naval Base	34,6	1,[illegible]	B
	Bachelor Civilian Quarters	17,2	340	B

130	Electrical Distribution System, NAS Cecil	$ 16.0	$ 490	C
136	BOQ, NAS Key West	115.5	2,516	W
139	Aerological Bldg, NavSta Kodiak	5.1	91	T
141	Chapel, NAS LeMoore	25.5	545	W
	Gym	22.0	476	W
156	Systems Training Bldg, NAS North Island	38.8	797	W
163	BOQ, NAS Whidbey Island	50.3	1,204	W
	Chapel	8.2	350	W
	Officers' Mess	15.0	344	W
175	Radio Facility, MCAAS Yuma	12.1	50	C
	Water System	23.3	556	C
180	Gym, NavAmDepot, Concord, Calif.	13.4	189	W
183	Barracks, Propellant Plant	15.6	199	W
189	Computation & Analysis Bldg, Dahlgren	78.3	2,042	T
191	Barracks & Mess, NADC, Johnsville	21.0	565	W
193	Alterations, Air Materiel Center, Phila.	37.0	482	C
196	Range Safety Facility, Pt Arguello	64.3	1,632	C
	Auto Maintenance Facility, Pt Mugu	35.1	330	C
	Missiles & Astronautics Facility, Pt Mugu	88.0	1,846	T
206	Acquisition of land, NAS Guam	4.0	133	C
210	Aerological Bldg, NavSta, Argentia	4.0	71	T
212	Barracks, MCAF Okinawa	27.8	339	W
	BOQ and Mess	41.5	886	W
	Swimming Pool	9.4	110	W
215	Barracks, MCAF, Iwakuni	19.8	679	W
222	Cold Storage, NavSta Rota, Spain	2.0	103	W
	Hospital	3.5	260	T
	Barracks	10.4	1,058	W
	Messhall	2.0	64	W
226	Sanitation Facilities, Okinawa	11.6	144	C
228	Rec. Bldg & Swimming Pool, NAF Sigonella, Sicily	17.0	374	W

197	Electrical Distribution System (Pole) [illegible]	[illegible]	[illegible]	[illegible]
197	[illegible]	[illegible]	[illegible]	[illegible]
198	[illegible]	[illegible]	[illegible]	[illegible]
201	[illegible]	[illegible]	[illegible]	[illegible]
200	[illegible]	[illegible]	[illegible]	[illegible]
203	[illegible]	[illegible]	[illegible]	[illegible]
205	[illegible]	[illegible]	[illegible]	[illegible]
206	[illegible]	[illegible]	[illegible]	[illegible]
207	[illegible]	[illegible]	[illegible]	[illegible]
208	[illegible]	[illegible]	[illegible]	[illegible]
209	[illegible]	[illegible]	[illegible]	[illegible]
210	[illegible]	[illegible]	[illegible]	[illegible]
211	[illegible]	[illegible]	[illegible]	[illegible]
212	[illegible]	[illegible]	[illegible]	[illegible]
213	[illegible]	[illegible]	[illegible]	[illegible]
214	[illegible]	[illegible]	[illegible]	[illegible]
215	[illegible]	[illegible]	[illegible]	[illegible]
216	[illegible]	[illegible]	[illegible]	[illegible]
217	[illegible]	[illegible]	[illegible]	[illegible]
218	[illegible]	[illegible]	[illegible]	[illegible]
219	[illegible]	[illegible]	[illegible]	[illegible]
220	[illegible]	[illegible]	[illegible]	[illegible]
221	[illegible]	[illegible]	[illegible]	[illegible]
222	[illegible]	[illegible]	[illegible]	[illegible]
223	[illegible]	[illegible]	[illegible]	[illegible]
224	[illegible]	[illegible]	[illegible]	[illegible]
225	[illegible]	[illegible]	[illegible]	[illegible]
226	[illegible]	[illegible]	[illegible]	[illegible]
227	[illegible]	[illegible]	[illegible]	[illegible]
228	[illegible]	[illegible]	[illegible]	[illegible]
229	[illegible]	[illegible]	[illegible]	[illegible]
230	[illegible]	[illegible]	[illegible]	[illegible]
231	[illegible]	[illegible]	[illegible]	[illegible]
232	[illegible]	[illegible]	[illegible]	[illegible]
233	[illegible]	[illegible]	[illegible]	[illegible]
234	[illegible]	[illegible]	[illegible]	[illegible]
235	[illegible]	[illegible]	[illegible]	[illegible]
236	[illegible]	[illegible]	[illegible]	[illegible]
237	[illegible]	[illegible]	[illegible]	[illegible]
238	[illegible]	[illegible]	[illegible]	[illegible]
239	[illegible]	[illegible]	[illegible]	[illegible]
240	[illegible]	[illegible]	[illegible]	[illegible]
241	[illegible]	[illegible]	[illegible]	[illegible]
242	[illegible]	[illegible]	[illegible]	[illegible]
243	[illegible]	[illegible]	[illegible]	[illegible]
244	[illegible]	[illegible]	[illegible]	[illegible]
245	[illegible]	[illegible]	[illegible]	[illegible]
246	[illegible]	[illegible]	[illegible]	[illegible]
247	[illegible]	[illegible]	[illegible]	[illegible]
248	[illegible]	[illegible]	[illegible]	[illegible]
249	[illegible]	[illegible]	[illegible]	[illegible]
250	[illegible]	[illegible]	[illegible]	[illegible]
251	[illegible]	[illegible]	[illegible]	[illegible]
252	[illegible]	[illegible]	[illegible]	[illegible]
253	[illegible]	[illegible]	[illegible]	[illegible]
254	[illegible]	[illegible]	[illegible]	[illegible]
255	[illegible]	[illegible]	[illegible]	[illegible]
256	[illegible]	[illegible]	[illegible]	[illegible]
257	[illegible]	[illegible]	[illegible]	[illegible]

234	Supply Admin Space, Phila.	12.5	250	C
241	Barracks, MCB, Camp Pendleton	379.4	3,480	W
	Fire Station		72	C
	Sewage Facilities		27	C
	Roads and Parking		343	C
252	Training Bldg, USMC Camp Butler, Okinawa	76.0	51	W
	BOQ		974	W
	Officers' Mess and Recreation Bldg		282	W
	Post Exchange		186	C
	Utilities		210	C
	Road		122	C
	Dispatch and Filling Station	198.9	74	C
	Auto Maintenance Shops		456	C
	Engineer Field Maintenance Shop		261	C
254	Barracks		1,158	W
	Messhall		485	W
	BOQ		310	W
	Utilities		135	C
255	Officers' Mess	30.0	62	W
	Guardhouse		87	C
256	Chapel		208	W
	Utilities		37	C
257	Service Schools Facilities: USNA, OCS, Amphib Base, ASW, FBM, Weapons Plant	1,348.8	25,923	W
284	Medical Facilities	685.3	13,329	W
315	Transmitting Facility, Eritrea	122.4	4,346	T
322	Research Facilities	241.3	5,847	T
330	Breakwater, Norfolk, Dubocks	10.0	572	C
331	Minor New Construction (extracted)		3,121	C
334	Restoration of damaged Facilities		1,000	C
	Access Roads		1,300	C
338	Power System, Guam		5,688	C

2	2Q	Supply Room (Semi Pilot)	1.5	20
2	2L1	Patients, Ind. Long Treatment	1.75	1,120
2		Fire Station		77
2		Cargo Facilities		97
2		Check and Mailing		20
2	2G	Training Bldg. GPOC and Battery Firewood Sch	0.5	32
2		Gym		475
2		Officers' Club and Recreation Bldg.		202
2		Post Laundry		180
2		Utilities		210
2		Shed		150
2		Operation and Filling Station	1.0	31
2		Tool Maintenance Shop		180
2		Engineer Field Maintenance Shop		301
2	2G	Barracks		1,180
2		Assembly		240
2		Mess		320
2		Facilities		210
2	2G	Officers' Mess	0.5	62
2		Quarters		87
2	2G	Chapel		200
2		Facilities		37
2	2J1	Special Service Facilities: USO, Soc. Events Hall, Rec. Rm, Wooden Floor 1,000		400
2	2G	Medical Facilities	0.5	1,120
2	2G	Transitive Facility, Office	0.5	1,080
2	2G	Operating Facilities	0.5	1,120
2	2G	Commissary, Service, Grocery	0.5	372
2	2J1	Alone Use Quarters (Patients)		1,400
2	2G	Warehousing of Damaged Facilities		1,200
2		Annex Inc 2		1,200
2	2J1	Power Service, Team		2,000

NAVAL RESERVE

342	Training Bldg, NAS Dallas	7.0	122	W
	Messhall	5.9	110	W
	BOQ	6.3	110	W
	Barracks, NAS Glenview	17.7	297	W
	Storm Sewer & Drainage System	24.6	365	C
	Barracks, NAS Grosse Ile	8.6	142	W
	Messhall	2.2	36	W
	Training Bldg, NAS Los Alamitos	5.8	76	W
	Training Bldg, NAS Minneapolis	7.8	100	W
	Barracks	20.0	296	W
	Fire Station, NAS New York	7.9	150	C
	Heating Plant	5.0	100	C
	Roads and Sidewalks	3.9	78	C
	Messhall, NAS South Weymouth	18.0	371	W
343	Surface Training Facilities	164.1	3,467	W
	Ground Training Facilities	43.0	785	W
348	Minor Construction		500	C

ARMY

405	GP Warehouse, Ft. Devens	15.0	766	C
	BOQ	2.2	481	W
	BOQ, Female	1.5	328	W
407	Med Barracks, Ft Dix	4.0	797	M
	Admin & Storage Bldg	1.0	135	C
	Barracks & Mess	8.0	5,713	W
	Mess Bldgs	8.0	1,303	W
	Admin & Storage Bldgs	6.0	829	C
	Hdqts & Classroom Bldgs	4.0	470	W
	Heating Plant	4.0	450	C
	Steam Dist Line	4.0	561	C
	Chapel	11.0	837	W
416	Chapel, Carlisle Barracks	7.9	490	W
419	Motor Repair Facilities (eng), Ft Knox	3.3	821	C
	Hospital Air Cond		1,062	M
	EM Service Club	12.0	677	W

		[illegible]		
5[illegible]	Training Bldg, Ft. Ord	7.0	152	A
	Baseball	7.0	100	A
	HQ	0.1	100	A
	Barracks, Ft. Ord	11.7	207	A
	Mess Hall & Dining Room	[illegible]	[illegible]	C
	Barracks, Fort Lewis, Tile	5.5	113	A
	Baseball	5.5	30	A
	Training Bldg, Ft. Lee Lewis	5.0	30	A
	Training Bldg, Fort Edmunds-Lis	7.5	100	A
	Barracks	20.0	100	A
	Pilot Building, Fort Eus Tore	7.1	130	C
	Training Plant	5.0	100	A
	Shop, Ord Training	3.9	73	C
	Barracks, Ft. Ord Bryanton	18.2	111	A
3[illegible]	Marine Training Facilities	100.0	3,607	A
	Marine Training Facilities	43.0	780	A
3[illegible]	Jap- Construction		200	C

[illegible]

3[illegible]	Ft Barrancas, Fl. Quads	15.0	704	C
	HQ	5.5	100	A
	Ft. Pickle	1.1	70	A
3[illegible]	Barracks, Ft Sim	4.4	177	A
	Alert & Signal Bldg	4.0	135	C
	Service & Store	0.0	1,713	A
	Bomb Shelter	0.0	1,301	A
	Mess & Dining Bldgs	3.0	309	C
	Officer & Dormitory Bldgs	8.0	470	A
	Quarter Trans	4.0	120	C
	Bomb Shelter	4.0	101	A
	Chapel	11.0	207	A
3[illegible]	Chapel, Utility Building	7.0	100	A
3[illegible]	Inner Court Facilities (Pool), Ft Ord	3.3	181	C
	Schools at Ord		1,[illegible]	A
	Ft Ord Bldg [illegible]	14.0	217	A

422	BOQ Ft Meade	1.7	383	W
	Dental Clinic	31.5	446	M
424	Barracks, BOQ, & DISPENSARY, Ft Ritchie	14.4	2,357	W
427	Refrig Warehouse Fac, Ft Benning	11.5	339	W
	EM Barracks medical	25.0	611	M
	EM Service Club	11.0	624	W
	Sewage Treatment Plant	26.0	1,572	C
	Oper & Classroom Bldg	1.9	44	W
	Camp Supply Bldg	.6	24	C
	Camp Storehouse	.6	25	C
	Dispensary	.1	62	M
	Latrines	1.1	54	C
	BOQ	1.2	63	W
	Recreation Bldg	1.0	40	W
	Elec Dist, Roads & Parking	1.6	54	C
	Storm Drainage Facilities	.2	12	C
435	Hdqts & Academic Bldg, Ft Bragg	10.2	1,523	W
439	Refrig Warehouse & Meat Proc Fac, Ft Campbell	15.6	742	W
	Gas Dist & Conversion	8.9	486	C
	Storm Drainage	84.9	2,300	C
443	Med Barracks, Ft McClellan	6.0	200	M
	BOQ	.8	170	W
446	Academic Bldg, Ft Rucker	13.6	482	W
	Lab Classroom Bldg	7.9	158	W
	BOQ	2.9	631	W
	Hdqtrs & Classroom	12.4	271	W
451	R&D Missile Inst Lab, Ft Bliss	8.6	269	T
	Eng Field Maint Shop	3.6	108	C
	Barracks	4.5	212	W
	EM Mess	7.4	324	W
	BOQs	3.2	154	W
455	Army Health Fac, Ft Hood	8.3	7,384	M
	Avenue	6.1	403	C
456	Elec Switching Facs, Ft Houston	5.9	426	C
461	Med Barracks, Ft Sill	1.4	521	M
	EM Barracks	26.0	1,460	W
	Mess Bldg	9.5	350	W
	Admin & Storage Bldg	5.9	213	C
	BOQs	10.0	2,536	W

123	Ace Pt Sales	1.7	100	x
	Social Clubs	1.5	100	x
125	Pyramids, ECG, & Ultrasound, Pt Studies	14.4	5,312	x
127	Surgi, Recovery Rm, Pt Gowning	11.3	100	x
	Ex Surgical Suites	8.7	100	x
	Ex Surgical Cost	11.7	100	x
	Central Sterilizing Plant	9.0	1,272	x
	Oper & Recovery Bldg	4.7	10	x
	Shop Supply Cost	7.	2	x
	Shop Equipment	4.	20	x
	Equipment	1.	23	x
	Laundry	1.1	4	x
	ENT	1.2	20	x
	Recovery Bldg	1.7	20	x
	Elec Svcs, Shop & Parking	1.3	4	x
	Home Health Facilities	7.	17	x
130	Admin & Academic Bldg, Pt Shop	12.2	1,221	x
132	Health Services & Med Rec Dep, Pt Complexity	12.2	100	x
	Ex Life & Conversion	3.7	100	x
	Admin Building	8.3	2,200	x
133	Ex Services, Pt Activities	8.2	200	x
	Ex	4.	100	x
140	Kennedy Bldg, Pt Center	13.3	100	x
	Ex Conference Bldg	7.7	100	x
	ECG	2.4	100	x
	Admin & Conversion	13.3	100	x
151	Ex Activity Ther Lab, Pt Area	3.	100	x
	Ex Fitness Training Area	4.	100	x
	Laundry	7.	200	x
	Ex Area	1.1	200	x
	Exam	3.	100	x
152	Area Testing Lab, Pt Area	1.	7,200	x
	Exam	4.1	100	x
152	Area Screening Ctr, Pt Location	1.	100	x
161	Med Services, Pt Lab	1.	100	x
	Ex Emergency	10.7	2,100	x
	Med Lab	1.7	100	x
	Admin & Exam Rooms	2.4	100	x
	Exam	10.0	2,200	x

465	Barracks to BOQs, Ft B Harrison	56.0	1,260	W
467	Power Supply, Ft Leavenworth	1.6	103	C
472	Dispensary, Ft Wood		134	A
473	Barracks	48.3	3,454	W
	Mess Bldgs	14.7	811	W
	Admin & Storage Bldgs	10.3	556	C
	Heating Plant	6.7	405	C
	BOQs	9.1	1,800	W
	Post Exchange	3.3	116	C
	Chapel	7.8	318	W
	Commissary Store	29.6	630	C
479	Mess Bldgs, Hunter-Liggett Mil Res	3.2	159	W
481	Post Exchange & Cafeteria, Ft Irwin	4.3	405	C
	Elec Dist Lines	6.3	248	C
484	Fire Station, Ft Lewis	2.1	142	C
487	Dormitory & Mess, Monterey	45.2	979	W
493	Dental Clinic, Ft Ord		458	A
	Sewage Disp Facs	25.7	1,345	C
	Water Supply		843	C
495	Elect Dist, Army Chem Center	13.8	681	C
496	Add to Army Hosp, Dugway Prov Grnd		405	A
	Elec Dist Sys	13.5	409	C
	Sewage Treatment	6.1	123	W
	NCO Open Mess	6.1	123	W
501	Engineer School, Ft Belvoir	51.7	1,954	W
504	Dynamometer Lab, Aberdeen Prov Grnd	7.6	318	T
508	Nuclear Effects Lab, White Sands	2.6	1,456	T
	Army Health Fac	2.5	1,878	A
511	Fire Station, Ft Lee	2.2	109	C
	Heating Plant	1.2	90	C
	QM Hqtrs & Storeroom Bldg	4.4	197	C
514	Locomotive Shelter & Repair, New Cumberland	1.5	70	C

182	Warwick Mr.Door, Pl & Matches	44.1	1,381	W
187	Fuel Depot, Pl Lawnmowers	1.1	101	S
192	Stationery, Pl Book		12	W
193	Dressing	46.1	2,434	W
	Dual Entry	12.7	611	
	Window & Storage Design	10.1	486	
	Quality Plant	2.7	130	
	Door	1.1	1,020	
	Pipe Fitting	3.1	149	
	Shovel	6.5	318	
	Centreing Core	14.5	690	
197	Home Bridge, Bowler-Liquid Air Ma	3.3	160	W
201	Free Lumber & Concrete, Pl Lynch	1.1	102	S
	Lower Vita Glass	1.3	84	
203	Fire Station, Pl Lewis	2.1	100	S
207	Cleaning & Room, Tomlinsy-	15.2	777	W
209	Metal Cables, Pl Ur		124	
	Design Deep Face	25.7	1,[illegible]	
	Water Supply		102	
217	Light Grey, Army Chem Center	11.8	561	S
218	Not In Army Hosp, Supply Fire Dept		102	
	Elec Pipe Ore	1.5	109	
	Design Treatment	1.3	102	
	Bcr Load Free	1.0	103	
221	Sprinkler Shown, Pl Nelson	31.7	1,[illegible]	W
224	Lumberyard Lab, American Fire Dept	7.4	312	S
232	Bolster Glitch Lab, Mills Chem	2.2	1,[illegible]	W
	Army Heating Ehr	2.2	1,[illegible]	
241	Fire- Station, Pl Lab	2.3	100	S
	Heating Plant	1.2	50	
	Or Repair & Inventory Only	1.0	197	
251	Lumberyard Shifter & Equal, Ron			
	Operation	1.5	70	S

523	Command Control Info Center R&D, Ft Huachuca	1.1	452	T
525	BOQ, Ft Monmouth	4.5	920	W
	R&D Lab	229.2	7,171	T
527	EM Barracks & Mess, West Coast	2.0	203	W
529	EM Barracks Wm Beaumont Genl Hosp	2.5	202	W
532	Brooks Army Med Center		834	M
534	Fitzsimons Genl Hosp	7.9	1,177	M
536	Dental Clinic, Ft Eustis	1.0	351	M
	BOQ	1.7	302	W
	Shop & Classrooms, School	22.7	624	W
539	USMA, West Point	11.9	657	W
544	EM Barracks, Eritrea	.5	95	W
	Water Supply System	4.0	88	C
	Central Power Plant	2.0	3,039	C
550	BOQ, USASA Loc 12, Japan	1.4	447	W
552	EM Barracks, England		135	W
558	EM Barracks, Loc 276		71	W
574	Sewage Treatment, Nancy Depot	5.1	108	C
583	Sewage Disposal, Verdun Post	11.9	248	C
593	Barracks, European Tropospheric Scatter Sys		733	W
598	Disp & Barracks, Ft Allen	4.0	171	W
602	BOQs and Barracks, ADC	3.8	140	W
	Latrine Facs	1.5	40	C
616	Minor Construction (extracted & interpolated)		2,853	C
611	Access Roads		1,500	C

523	Cameron County Bus Corporation, Pt Isabella	1.1	521	T
525	Ohio, PC Economy	8.5	720	W
	ABC/Lab	929.2	1,171	T
527	AM Services & Sun, West Coast	2.9	300	W
529	PT Products Wh Consumers Coral Bldg	3.5	322	W
532	Canada Army Sec Center		400	K
534	Fitzsimons Gen Hosp	7.9	1,177	W
536	General Clinic, PC Eurasia	1.0	321	T
	ROW	1.7	329	W
	Ohio & Classroom, School	93.7	425	W
537	USDA, Lake Phelps	11.0	457	W
542	AM Services, Clifton	.5	72	W
	Sales Support Tables	8.4	23	C
	Control Power Plant	9.0	1,0[illegible]	T
560	ROO, Sunset Loc 12, Japan	1.6	107	W
577	Wolverhampton, England		139	W
582	Ft Barrancas, Loc 276		71	W
583	Jewish Treasurer, Army Depot	5.1	109	C
585	Jewish Hospital, Verdun Park	11.7	203	C
593	Hartford, Corpus Propopulsion: Sealer Tps		715	W
596	Ship & Machines, PC Allen	4.0	171	W
600	Ohio and Berkeley, ABC	3.8	160	W
	Lawrence Fact	1.5	94	C
610	Other Conservation (Subsected & Independent)		4,857	E
611	Access Week		1,[illegible]	E

	ARMY RESERVE			
621	Reserve Center Construction and Alteration		$8,000	C
	ARMY NATIONAL GUARD			
626	Armories		7,000	C
	AIR FORCE			
42	Officers Quarters Barter Is.	17.4	291	W
45	Auto Maint Shop, Bear Creek	6.2	116	C
49	Recreation Bldg, Cape Lisburne AFS	18.3	366	W
51	Recreation Bldg, Cape Romanzof AFS	15.6	311	W
59	Recreation Bldg, Tin City AFS	18.3	366	W
61	Open Mess Officers, Eielson AFB	2.5	354	W
65	Roads, NCO housing area, Elmendorf AFB	13.9	278	C
69	Medical Facility, Richards Gebaur AFB	12.0	158	M
75	Runway addition, Duluth Mun Airport	65.0	1,566	C
	Field Training Facility	18	291	W
	Warehouse, base supplies & Equipt	10	150	C
	Dispensary & Dental Clinic	26	465	M
	Land for Runway extension		34	C
79	Training Facility, Grand Forks, AFB	16.0	330	W
	Civ Eng Maint Shop	9.3	147	C
	Warehouse, base Sup & Equipt	15.1	200	C
	Hot Water Mains	37.7	300	C
83	Field Training Fac, Sawyer AFB	11.0	258	W
	Dormitory, Airmen	30.0	800	W
	Commissary Store	8.0	151	C
87	Training Fac, Kincheloe AFB	11.0	260	W
	Civ Eng Maint Shop	9.5	220	C
	Dormitory, Airmen	28.0	388	W
	Exchange Sales Store	12.0	187	C
	Open Mess, NCO	20.0	300	W
91	Auto Maint Shop, Kingsley Field	27.3	410	C

	[illegible] Projects:			
021	Bowery Canoe Construction and Education		60,000	C
	Army National Guard			
030	Lincoln		7,000	C
	Air Force			
04	Offices Complex Barter St.	17.9	202	W
05	Bus Stop, Shop, Open Space	0.5	110	V
10	Storage Ice Bldg, Cape Lookout AFS	18.1	300	W
21	Recreation Bldg, Cape Hatteras AFS	12.4	315	V
24	Recreation Bldg, The City AFS	10.1	102	V
31	Open Mess Facility, Elmira AFS	2.2	124	V
35	Fence, 900 Bowling Alley, Lumberton AFS	14.4	271	C
38	Auxiliary Utility, Roanoke Rapids AFS	12.0	42	W
77	Runway Rehabilitation, Seymour Johnson Air Force	12.0	1,300	C
	Fuel Training Facility	10	211	C
	Warehouse, Base Supplies & Equipt.	10	150	C
	Dispensary & Dental Clinic	80	100	C
	Lawn for Runway Extension		30	C
79	Training Facility, Pope Air Force, AFB	16.0	200	C
	Air Ed Tech Bldg	0.1	147	C
	Warehouse, Base Ser & Equipt.	12.1	100	C
	Gas Service Station	12.7	300	C
81	Field Training Bldg, Sampson AFS	11.0	202	W
	Dormitory, Linen	34.0	100	W
	Commissary Store	0.0	101	C
87	Training Fac, Eldorado AFS	11.0	200	W
	Air Ed Music Shop	72	100	C
	Dormitory, Linen	34.0	200	W
	Commissary Sales Store	12.0	107	C
	Open Mess, BOQ	20.0	300	W
91	Area Maint Bldg, Lowry Field	77.1	410	C

93	Auto Maint Shop, Minot AFB	21.2	354	C
	Cold Storage Bldg	4.3	83	W
	Dormitory, airmen	43.3	618	W
	Officers quarters	4.8	170	W
	Electric Powerplant	2.2	35	C
	Electric Primary power	2.5	100	C
	Elec Distribution Line, Off housing	2.1	40	C
	Water Storage Tank	25.9	235	C
	Water Pump Station	25.9	110	C
100	Runway extension, Paine Field	55.5	1,620	C
	Auto Maint Shop	24.4	308	C
	Land for Runway Extension		132	C
107	Dispensary, Suffolk Co AFB	29.0	587	M
115	Composite Medical Fac, Hill AFB	134.9	2,136	M
	Logistical Fac depot	33.2	392	C
	Chapel	37.1	331	W
121	Personnel Fac, Hill AF Range	28.2	262	W
	Electric Power	13.5	105	C
	Electric Distribution Line	41.6	489	C
	Water System	107.6	899	C
	Roads	107.3	685	C
127	Logistical Fac air conditioning, Robins AFB	2.9	74	C
133	R&D Labs, Wright-Pat AFB (materials)	73.0	781	T
	" (polymer research)	39.6	560	T
	Special Lab analysis	5.0	104	T
	Lab research environment	19.0	331	T
	Electrogas Dynamics fac	540.0	10,000	T
	Radiolog Health lab	15.0	310	T
	Elec distribution line	5.0	95	C
137	R&D, Gas Dynamics & Propulsion, Arnold Engineering Development Center	105.5	2,462	T
139	R&D Facs, Cape Canaveral	144.0	2,194	T
141	Missile Comm, Coolidge AFB	50.0	1,429	T
143	Missile Instrumentation, Melbourne Telemetry Sta	58.0	833	T
145	Missile Instrumentation & Comm, Wideawake Field	128.4	3,478	T
147	Biosystems Research Lab, Brooks AFB	90.0	1,559	T

79	Auto Lamps Corp, Alnck ATC	72.4	75	C
	Cole Chrysler Ltd	6.7	65	F
	Dominion, Alnck	10.1	618	B
	Ontario Motors	6.8	170	F
	Electric Furniture	2.2	15	C
	Electric Trading Power	2.2	101	C
	Elec Distribution Lim, Cit Hamilton	2.4	10	C
	Home Service Tool	25.9	419	C
	Motor Prod Station	25.9	110	C
190	Economy Extension, Pelee Island	22.5	1,820	C
	Auto Radio Corp	21.6	300	C
	Lake Ser Energy Schedule		232	C
197	Dispensary, Nuxious Co ATC	70.0	301	B
115	Superior Radiant Inc, Stat ATC	120.1	1,126	B
	Industrial Tel Supply	12.9	379	C
	Tempel	17.1	331	W
121	Provincial Pub, Stat AC Merger	20.2	300	B
	Electric Power	12.5	125	C
	Electric Distribution Lim	21.5	185	C
	Water System	107.0	870	C
	Power	107.3	800	C
141	Laboratory Inc Air Conditioning			
	Union Gas	5.7	16	C
111	Mid Lake, Bright-Pet ATC (Industrial)	72.0	760	F
	" (Power research)	37.5	581	F
	Social Sec Analysis	5.1	320	F
	Lab Research Antimonate	11.0	334	F
	Electronic Dynamics Inc	510.0	10,000	F
	Metalog Equip Inc	15.3	310	F
	Elec Distribution Lim	5.0	59	C
117	Ind, Gas Chemic & Propulsion, Brook			
	Engineering Development Comm	103.1	3,100	F
113	Mid Fres, Ope Commercial	100.4	3,100	B
144	Electric Comm, Smiths ATC	300	1,020	F
107	Electric Instrumentation, Toronto			
	Chemistry Lab	60.0	817	F
103	Electric Instrumentation & Comm,			
	Standard Plain	108.1	3,170	F
107	Chrysler Motors Corp, Windsor ATC	90.0	1,070	F

149	Propulsion & physiological research, Edwards AFB	323.6	3,181	T
151	Science Lab, Sacramento Peak	5.0	45	T
153	Auto Maint Shop, Eglin AFB	25.6	564	C
	Spec Research Structures	18.5	282	T
155	Bioastronautics research, Holloman AFB	28.8	619	T
	Open Mess, NCO	26.0	324	W
157	R&D Support, Hanscom Field	122.5	2,752	T
163	Base Comm, Patrick AFB	21.0	298	C
	Medical Facility	160.0	2,865	M
	Admin missile research engineering	58.0	2,870	T
	Dormitory, airmen	10.0	200	W
	Elec Dist Line	5.0	100	C
	Sewage Treatment & Disposal	15.0	300	C
173	Chapel, Carswell	9.3	154	W
	Service Club	10.3	230	W
177	Civ Eng Fac, Clinton-Sherman AFB	6.4	96	C
184	Fire Station, Ellsworth AFB	3.3	51	C
196	Air Conditioning, Hdqtrs, McConnell AFB	7.1	90	W
202	Fire Station, Schilling AFB	3.3	32	C
206	Dental Clinic, Westover AFB	23.0	271	M
207	Service Club, Bergstrom AFB	7.2	93	W
	Recreation Gym	10.0	257	W
210	Med Fac, Blytheville AFB	29.0	644	M
212	Dormitory, Airmen, Columbus AFB	5.0	355	W
213	Auto Maint Shop, Dyess AFB	8.0	75	C
217	Training Facs, Glasgow AFB	22.8	276	W
	Open Mess, Off	20.3	270	W
218	Med Fac, March AFB	252.0	4,327	M
225	Med Fac, Offutt AFB	242.6	4,216	M
	Dormitory, Airmen	25.4	200	W

149	Physiologic & Cytopathology Research, Sunrise ARF	141.1	1,111	T
151	Holmes Lab, Internal Med	5.5	45	T
153	Adir-Robin Corp, Lodi ARF Tyco Research Laboratories	25.0 14.1	240 202	C T
155	Ultrastructure Research, Hillsdale ARF Cyan Corp, EDC	36.8 23.0	616 354	T W
157	ABL-Cypress, Berrow Tiwi	122.5	1,752	T
163	Geo. Cross, Pelvis ARF Hospital Pharmacy Alain Allain Research Laboratory Operating Altman Cor. Art Line Hemo Transducers & Dispensi	21.1 100.0 52.0 12.0 5.5 12.5	200 2,080 1,070 200 120 300	L C T W C C
173	Shepard, Cornwall Tennis Club	8.3 10.1	180 220	W W
177	Air-Ox Pmt, Clifton-Berman ARF	6.0	80	C
181	Tim Jenkins, Dilmorth ARF	1.1	32	C
193	Air-Conditioning, Sutre, Acoustell ARF	7.1	72	W
202	Fire Station, Building ARF	3.3	32	O
205	Wheat Clinic, Mesquite ARF	0.0	270	W
207	Service Corp, Bergstrom ARF Tonawanda Cor	3.1 10.0	53 157	W W
210	Nat Pro, Elizabeville ARF	20.4	401	W
212	Chemicory, Altman, Sonoma ARF	5.0	255	W
214	Ann Motor Corp, Ypsen ARF	0.0	72	C
217	Trelatec Inc, Glasgow ARF Ipsen Bank, 102	34.3 30.4	370 270	W W
219	Nat Pro, Baron ARF	152.0	4,207	W
225	Ann Inc, Olmos ARF Cornwall, Lifton	143.0 25.0	4,114 200	W W

234	Civ Eng Support, Wurtsmith AFB	23.5	447	C
	Base Chapel	12.0	172	W
245	Dining Hall, airmen, Amarillo AFB	6.0	64	W
	Officers quarters	7.0	72	W
247	Technical Training, Chanute AFB	60.0	1,068	W
	Chapel	18.0	371	W
	Heating Plant	4.0	118	C
	Water Supply	10.0	114	C
249	Dormitory, airmen, Connally AFB	4.5	62	W
	Elec Dist Line	7.8	129	C
252	Electronic Training Shop, Keesler AFB	13.0	247	W
	Dining Hall, Airmen	24.0	478	W
	Open Mess, NCO	31.6	563	W
254	Off Training School, Lackland AFB	64.0	1,287	W
	Dental Clinic, Lab, Dental Training Fac	60.6	954	M
	Training Hdqtrs	22.8	490	W
	Cadet Quarters	70.0	1,570	W
	Chapel	18.6	307	W
	Open Mess	18.0	400	W
	Sewage Treatment & Disposal	5.0	80	C
263	Technical Training Fac, Sheppard AFB	70.0	1,125	W
	Technical Training Fac, modification	73.0	1,042	W
	Officers Quarters	28.0	314	W
264	Air University Command, Gunter & Maxwell AFBs	13.7	315	W
270	Hdqtrs addition, R&D, Andrews AFB	60.0	799	T
277	Med Fac, Travis AFB	75.6	659	M
287	Med Fac, Langley AFB	206.0	3,078	M
294	Warehouse, Nellis AFB	21.4	345	C
	Med Fac	98.1	2,230	M
	Water Well	33.3	246	C
298	Auto Maint Shop, Pope AFB	11.3	174	C
	Off Quarters	5.7	260	W
302	Dormitory, airmen, Sewart AFB	8.0	365	W
304	Storm Drainage, Capehart Housing, Seym Johnson AFB	4.1	80	C
308	Civ Eng Fac, Adair AFSta	4.7	79	C

204	Elm Log Company, Wenatchee, WTR	21.1	147	C
	Dual shaper	13.0	178	W
205	Sitting Bull, Alberta, Amerillo AFD	8.9	54	E
	Sitting quarters	7.0	72	W
207	Technical Training, Omaha AFB	32.0	1,202	T
	Shaper	10.0	171	W
	Heating Plant	6.0	118	C
	Exec. Bldg.D	18.0	115	C
210	Laundry, Lyman, Connally AFD	4.1	54	W
	Line dry line	7.4	124	C
212	Technical Training Shop, Bassler AFB	40.0	317	B
	Table, Hold, Lyman	30.0	475	T
	Open Pers, BCC	21.0	201	W
215	USA Training School, Lackland AFB	84.0	1,217	W
	Dental Clinic, Lab, Dental Training Fac	60.5	521	B
	Training Rooms	32.8	120	W
	Cadet Quarters	71.0	1,270	W
	Chapel	16.0	107	E
	Open Area	12.0	108	W
	Lab.X Treatment & Diagnosi	5.0	40	C
220	Technical Training Fac, Shoppers A/G	72.0	1,125	W
	Technical Training Fac, modification	71.0	1,062	W
	Officers Quarters	18.5	104	W
224	Air University Command, Gunter A			
	Maxwell AFB	10.7	102	W
227	Thomas Addition, CAO, Bowlens AFB	30.0	170	T
227	Bus Fac, Tavia AFB	72.8	658	W
227	Gym Fac, Langley AFB	100.0	1,025	W
234	Maintenance, Reese AFB	21.6	242	C
	Jet Fac	20.1	1,120	C
	Motor Vehi	10.1	204	C
236	Vehicle Shop, Tyndall AFB	11.1	174	C
	Gym Dentist	7.7	80	W
238	Veterinary, Kirtland, Sandia AFB	6.0	240	W
245	Lowry Technical Operations Building,			
	Lowry Colorado AFB	1.4	60	C
246	City Log Fac, Eglin AFB	0.7	70	C

309	Sewage Treatment & Disposal, Ft Fisher AFSta	3.3	32	C
312	Storm Drainage disposal, Houma AFSta	7.5	140	C
314	Off Quarters, Hancock Field	6.5	384	W
316	Open Mess, NCO, Sundance AFSta	4.6	59	W
318	Auto Storage Fac, Topsham AFSta	6.0	55	C
325	Dormitory, airmen, Cape Parry DEW Sta	10.1	169	W
327	Dormitory, airmen, Cartwright AS	9.6	160	W
	Multipurpose Recreation Fac	15.0	250	W
329	Dormitory, airmen, Hall Beach DEW Sta	3.0	152	W
331	Dormitory, airmen, Hopedale AS	9.6	160	W
	Multipurpose Recreation Fac	5.0	250	W
333	Dorm, Airmen, Melville AS	13.5	225	W
335	Laundry, drycleaning Fac, Sondrestrom Airbase	40.0	421	C
	Sanitary Sewage Mains addition	7.2	143	C
	Water Mains addition	11.8	143	C
337	Multipurpose Recreation, StAnthony AS	5.0	250	W
347	Hot water mains, Laon AB	1.5	62	C
358	Supply Maint Fac, Ankara AS	34.7	1,000	C
	Post Exchange & Commissary	34.7	700	C
	Utilities	15.5	300	C
361	Airmen dormitory, Bentwaters RAF Sta	34.2	560	W
	Sewage Treatment & Disposal plant	10.8	176	C
	Water Storage	7.5	120	C
	Road	4.8	84	C
366	Dormitory, airmen, RAF Lakenheath	28.0	514	W
380	Officers quarters, Clark AFB	11.7	280	W
	Electric Power	21.3	570	C
	Elec Primary Power	9.9	434	C
383	Dormitory, airmen, Ie Sima Aux Field	5.0	95	W

308	Sunny Transport & Forwarders, El Fidar	2.3	12	C
312	Green Valley Shipyard, Nouvel Afrique	14.5	108	C
314	Cut Quarters, Mandara Coast	0.5	168	A
314	Open Seas, Edi, Nouvelle Afrique	1.8	59	B
315	Blue Jackal Inc, Tandoma Africa	6.0	69	C
318	Pawnbroker, Eldman, Cape Mercy Des Iles	10.1	197	B
317	Gun-Locker, Elmed, Lyrcastigh A1	4.4	120	B
	Spitfirecorp Surveillance Inc	16.0	250	A
320	Vendetta, Elmed, Edi Beach Des Iles	1.0	152	A
321	Bartender, Elmed, Rosemary A1	3.3	140	B
	Spitfirecorp Surveillance Inc	5.5	250	A
323	Gem, Elmed, Serrilla A1	13.5	170	B
325	Laundry, Cycloning Pb, Centralia	10.0	120	C
	Sentry Space Ring Station	7.8	121	C
	Inter Stars Shuttle	11.0	140	C
327	Spitfirecorp Surveillance, Nakhlung A1	1.3	250	A
327	Sky Metal Mine, Lalo A8	4.3	90	C
329	Cosmic Exec Inc, Lunar A1	30.7	1,120	[illegible]
	Fort Technology & Consultants	16.7	70	[illegible]
	Services	55.5	50	[illegible]
331	Alcoa Chemicals, Vancouver Air Ins	30.3	200	A
	Sunny Fertilizer & Chemical Plant	12.7	170	[illegible]
	Inter Stars	7.5	140	[illegible]
	Gas	5.4	70	[illegible]
332	Fortuna, Elmed, Sky Longwood	25.0	540	A
334	Infinite Systems, Clara 4B8	12.7	280	A
	Stretch Cargo	11.3	270	[illegible]
	Blue Yellow Moon	8.9	130	[illegible]
334	Dentistry, Elmed, Ie Tome Des Plain	5.0	70	A

391	Dormitory, airmen, Misawa AB	21.5	208	W
	Sewage Treatment & Disposal	5.8	103	C
	WaterMains	13.5	132	C
397	Service Club, Naha AB	6.0	307	W
402	Dormitory, airmen, OSAN Ab	24.2	394	W
	Off Quarters	14.0	236	W
	Elec Dist System	1.2	60	C
	Drainage System	5.1	170	C
406	Dorm, Airmen, Tachikawa AB	42.2	360	W
	Off quarters	34.7	450	W
409	Recreation, multipurpose, Tainan AS	9.4	165	W
411	Recreation, multipurpose, Taipei AS	3.9	165	W
	Dorm, Airmen	16.5	265	W
418-437	Minor Construction (extracted & totaled)		7,172	C
441	Non-Missile Access Roads (Minuteman: $10,500,000)		6,822	C
444	Minor land acquisition (interpolated: 1/3 x 300,000)		100	C
448	Space Technology Facs and Launching Sys		49,000	T
	Living Quarters, Missile Sites (interpolated)		3,460	W

AIR FORCE RESERVE

491	Dorm, Airmen, Andrews AFB		54	W
492	Dorm, Airmen, Bates Field		63	W
494	Warehouse, supplies & Equipt, O'Hare Intl Airport		240	C
496	Warehouse, supplies & Equipt, Richards-Gebaur AFB		60	C
	Tech Training		170	W
501	Warehouse, Sup & Equipt, Gen Mitchell Field		109	C
	Dorm, Airmen		95	W
	Dining Hall, Airmen		70	W

391	Laboratory, alarm, Gigwa AS Gamma Pre-items & Disposal Washing	11.5 3.8 13.5	204 100 112	W C C
397	Marine Cleo, Eno AS	4.0	207	W
402	Aerialory, alarm, Ulsa AS Oil Gearbox Blue Ball Drive Sensing System	12.5 18.8 1.4 3.1	300 234 32 170	W W C C
406	Core, alarm, Trolleman AS Oil Surface	16.8 32.7	300 250	W W
409	Generation, multipurpose, Telman A/S	9.8	105	W
412	Generation, multipurpose, Tadpel A/S Core, Flight	7.5 12.3	160 185	W W
416- 417	Fine Construction (Lorenz) & (Lenzo)		7,172	C
421	Electricity Power Home (Wrulsson Lighting)		5,422	C
424	Fuel and acquisition (Incorporated: $41 + 200,000)		100	C
426	Home Tradeship Pace and Lumbling Sys Lifing Shelter, Hostile Area (Inter- national)		49,020 3,054	T W
	<u>ALL FUTUR RELEASE</u>			
399	Core, Airmen, Barrens AFB		50	W
402	Core, Lenzo, Dodge Flin		50	W
404	Resource, supplies & Spring, Fuel Lift Airport		40	C
408	Generator, Tooling & Spring, Airdrove- Robert AFB Tech Training		60 170	C W
324	Resource, up & Spring, Gas Airport Flin Lore, Airmen Dining Hall, Airmen		100 70 70	C W W

503	Tech Training Bldg, Hanscom Field	124	W
	Warehouse, Sup & Equip	100	C
507	Warehouse, McGuire AFB	300	C
511	Warehouse, NAS Willow Grove	126	C
	Dorm, Airmen	77	W

AIR NATIONAL GUARD

525	Runway ext, Alpena Co. AP	527	C
526	Runway ext, Dannelly Fld	858	C
531	Runway ext, Gulfport MAP	381	C
533	Runway ext, Salt Lake City MAP	219	C
534	Runway ext, Springfield MAP	509	C
547	Runway ext, Rosecrans Mem AP	1,401	C
527	Apron, Detroit-Wayne MAP	480	C
530	Apron, Greater Peoria AP	250	C
533	Apron, Salt Lake City MAP	504	C
535	Apron, Travis Field	620	C
547	Apron, Rosecrans Mem AP	643	C
539	Warehouse, Sup & Equip, Anchorage IAP	240	C
545	Auto Maint Shop, Little Rock AFB	145	C
552	Minor Construction (extracted)	222	C
522	Planning & Design (interpolated)	450	C

501	Dave Trading Corp, Seattle Plant Woodward, Jon & Cecile	181 100	B C
502	Warehouse, Seattle WA	200	C
511	Warehouse, Ann Arbor Area Ann Arbor	181 77	C B

All Northern Area

521	Sunny Acq Corpus Co. AZ	521	C
526	Sunny Acq Chandler AZ	526	C
531	Sunny Acq, Gallipolis OH	161	C
532	Sunny Acq, Salt Lake City UT	216	C
536	Sunny Acq, Springfield MO	279	C
542	Sunny Acq, Kennewick WA	1/21	C
557	Sunny, Scottsdale AZ	126	C
570	Sunny, Corpus Christi TX	126	C
571	Sunny, Salt Lake City UT	206	C
576	Sunny, Tempe AZ	499	C
587	Sunny, Kennewick WA	861	C
597	Warehouse, Jon & Cecil, Kennewick WA	100	C
599	Auto-Sales Corp, Atlanta Area GA	165	C
592	Sales Commission (interest)	222	C
595	Finance & Leasing (Interest)	120	C

DEFENSE AGENCIES

613	Loran Stations, Defense	$22,000	T
621	Animal Clinical Research Facilty and Laboratory Building, Defense Atomic Support Agency	968	T
	Air-Condition Dormitory	36	W
	Natural Gas Conversion	238	C
	Air-Condition Barracks and BOQ	82	W
	Water System	60	C
	NCO Open Mess	411	W
	Evaporative Cooking, Barracks	75	W
644	Defense Supply Agency	9,207	C

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*Construction Hearings, Part 1: "Department of the Army; Department of the Navy."

+M: Medical; W: Welfare; C: Civic; T: Technical.

#Construction Hearings, Part 2: "Department of the Air Force; Defense Agencies; Loran Stations, Defense."

DEFENSE AGENCIES

413	Liaison Services, Defense	320,000	T
421	Assist Clinic of Learning Facility and Laboratory in Lima, Peru, Peace Atomic Square Agency	500	I
	Air-Conditioning Equipment	30	W
	Security Fire Conversion	275	C
	Air-Conditioning Equipment and Equipment	85	W
	Water Wells	60	C
	Mob Open Area	115	W
	Property Testing, Services	15	W
422	Defense Nuclear Agency	5,000	C

"Construction Services, Part 1: "Operations of the Army Engineer-ing of the Army."

"Construction Services, Part 2: "Operations of the Air Force; Defense Facility Lima Station, Defense."